3

Spir. Temp.

Fos. .....

Spir. Temp. ..

Extr. | Seem

Spectr. Temp. . 4.5 . . . . Dome Temp./Hum. . . . . Transparency Conditions . . . .

Focus . . . . . 100 R . . . .

Spectr. Temp. . . . . Dome Temp./Hum. . . . .

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality

David Dunlap Observatory
74" logbook
Vol. 52
Plate Nos. 42539 – 43302
Apr. 1978 – Mar. 1979

3

5

Date April 17 18 1978 Observers BJ-R

Emulsion Batc

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Compon Type/Filter	Exp.
42539	HD 96003	10h 39.3	+13° 12'	19:49	21:46	00h 09m W	+13° 46'	Fe ARC UV PHO	90/200
42540	HD 135679	15h 11.3	+26° 01'	21:59	23 53	01	25° 41	Fe ARC UV PHO	90/200
4254091	spot cal fn plates 42539 - 43			15 min @ 15 volts		D4 3900	D3 4300	P 48	2 0
4254072	step cal fn plates 42539 - 43					900s			
42541	HD 138406	15 26.8	+62° 05'	00 21	02 06	00 01 W	+61 44	UV 1.1 FC ARC	300/200
42542	HD 156547	17 13.1	+26° 00'	02 15	03 44	00 03	+25° 51	UV 1.1 FC ARC	90/200
42543	HD 163506 (89 Her)	17 51.4	+26° 04'	03:48	04 11	00 16 E	+26 06	"	90/110
42544	HD 172044	18h 32.9	+33° 23'	04 20	04 41	00 E	+33 26	"	90/105
4254471	step cal fn plate 42544		90s						
4254471	focus test out out/in in							Fe ARC NEFIL	90/100
2	standard focus test								
3	full aperture "focus" test								
4	standard focus test								
5	full aperture "focus" test								

Spectr. Temp.
Focus
Spectr. Temp.

Spectr. Temp. 45°F Dome Temp./Hum. +02°C 80% Transparency Conditions . GOOD - SOME THIN CLOUDS

Focus 100R

Spectr. Temp. 38°F Dome Temp./Hum.

6

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/200	2-3	6.75	Ap	G-12	WG12/.713	9/.5	IIaO-E	A	Ap-MR	tele reversed	fine
800/200		6.67	B9	"	"	"	"	B	Ap MR	"	fine
							IIaO-E			(looked at Nova candidate	
										SAO 121466 - visual magnitude	
800/200	3-4	6.79	A0	G-12	WG12/.713	9/.5	IIaOE	A	Am MR	estimate 8-9 - colour	
800/200		7.04	A5	"	"	13/.5	"	B	Ap-MR	appeared normal for G type)	
400/110		5.81	F2Ia	"	"	"	"	A	Cpl. Pe		fine
400/103		5.4	B9	"	"	9/.5	IIaO-E*	B	Std Vel		fine
							IIaO-E*				
Focus	100R	Temp.				9	IIaO-E*	B		V, sl	
	100R		38°			9	IIIaJ			very sl	
	"					9	"				
	OR		38°			9	"			strongly to blue	
	OR					9	out of focus lines slightly stronger on red side				
	Have Reset to 100R										

3

7

Date April 19 1978 Observers KK

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seei
4254T2	flexure test	$0^h \rightarrow 5^h$ E	+30°					Fe num	88		
T3	"	4^h E $\rightarrow 0^h$	+30°					"	"		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~88~~						G12			IIIaJ	A	→ angle opposite to previous flexure results	44°F 100R doubled	
	〃					〃			〃	B		elongated only	

3

9

Date 21/22 APR 1978 FRI/SAT Observers Blu-Tu / Fqi-Tn

Emulsion Batches:
IIaO-E 23087 - 17048
098-02E 30096 - 05048

Spectr. Temp. 3
Focus 100
Spectr. Temp. 3

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
42545	HD 112028	12H 48M .3	+83° 58'	19:51	20 34	02 35 E	+83° 33'	Fe Arc IVD 1.10	7-9-3	200/72	2"
42546	HD 86596	9H 57M .6	+ 25 02	20 43	00 09	03 51 W	+ 29 41	Fe Arc None	4-4-4	400/65	3"
42545T	SPOT Calc for 42545.			15 min @	15V D4 3900	D3 4300	D2 4810				
42546T	SPOT Calc for 42546-50.			15 min @	15V D3 4810	7V D1 Hα	7V D2 5450				
42547	BD +36° 2344	13h 06.0	+36° 28	00 14	02 25	02 56 W	+36° 04	Fe Arc NONE	3-4-4	800/187	2"
42547T	Strip Calc for	42546-50,				90 sec					
42548	HD 163930	17h 53	+15° 08.9	02 36	03 57	00 17 E	+15° 09	Fe Arc NONE	3-4-	400/87	2"
42548T	Strip Calc for	42545,				90 sec					
42549	HD 146361	16h 10.9	+34° 07	04 02	04 24	01 51 W	+33° 56	Fe Arc NONE	4-4-4	400/82	2
42550	HD 146361	16h 10.9	+34° 07	04 25	04 45	02 12 W	+33° 56	Fe Arc NONE	4-4	400/82	2

Spectr. Temp. 38°F ..... Dome Temp./Hum. 36°/67% ..... Transparency Conditions Excellent .....

Focus ... 100R .....

Spectr. Temp. 34°F ..... Dome Temp./Hum. -1°/72% 10

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		200/72	2"	5.2	Shell	WG12	G12/.7B	13/1.5	IIa-0E	A	Shell-Bln		
		400/65	3"	7.91	KOI	G16	G16/.7B	13/1.5	098-02E	B	Sp Bin-Bln		fine
									IIaO-E				
									098-02E				
		800/187	2"	9.31	F4	G16	G16R/.7B	18/1.5	098-02-e	A	RSCVn/Fgi		fine
									098-02E				
		400/87	2"	7.3	F4	G16	G16R/.7B	18/1.5	098-02-e	B	RS CVn/Fgi		fine
									IIaO-E				
		400/82	2"	V=5.76	dF6	G16	G16R/.7B	13/1.5	098-02-e	A	RSCVn/Fgi		
		400/82	2"	V=5.76	dF6	G16	G16R/.7B	13/1.5	098-02-e	B	RSCVn/Fgi		
							098-02		4" D17	68°F	27 196		
							IIaO				20 160		

3

11 2 Large Tours 2.5 hrs
Sat-Sun

Date 22/23 Apr. 1978. Observers Zd-Tn / Tn-Fgi

Emulsion Batches:
098-02 E 30097 - 22042
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42551	HR3572 = α Cnc	08 53	+12 15	22 05	22 47	3.35 W	+12 03	Fe Arc None	4-5-6
42552	HR 3572 = α Cnc	08 53	+12 15	22 48	23 21	4 12 W	+12 03	Fe Arc none	6-5-6
42553	"	"	"	23 25	23 45	4 33 W	"	Fe Arc none	6-6-6
42553T	Spot Calib for 42551			15 min @	15V D3 4810	7V D1 Hα	7V D2 5450		
42554	HD 106677	12h 11.0	+73 07	23 52	00 56	2 26 W	+72 42	Fe Arc none	4-4-4
42555	BD +36° 2344	13h 06.0	+36 28.0	01 03	03 17	3 52 W	+36 08	Fe Arc NONE	3-3-4
42555T	Strip Calib for 42551					90sec			
42556	HD 146361	16h 10.9	+34 07	03 33	03 55	1 27 W	+34 00	Fe Arc NONE	4-4-4
42557	HD 146361	16h 10.9	+34 07	03 56	04 19	1 51 W	+34 00	Fe Arc NONE	4-4-4
42558	HD 146361	16h 10.9	+34 07	04 20	04 44	2 16 W	+34 00	Fe Arc NONE	4-4-4
42558F	Focus Test	G16	min	out out		"	+34	"	
42558F2	Focus Test	G43	"	"		0-0	+0°	"	5-5
T1			over	1 in	all ends on mid-limb	0-3 45 W	+0°		"
T2						3 45 W → 0	+30°		
T3						0 → 3 45 E	+30		

Spectr. Temp
Focus
Spectr Temp

Exp Mr	Seen
200/172	
200/163	
200/152	
200/192	
400/89	
400/91	
400/99	

Spectr. Temp. +40°F ..... Dome Temp./Hum. 35°F / 64% Transparency Conditions Excellent - slt haze

Focus ....100R.....

Spectr. Temp. +36°F ..... Dome Temp./Hum. 32°F / 67%

12

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/160	2"-3"	V= 4.23	A5m	G16R	G16/.7B	91.5	098-02E	A	2d-Am std		v sl str
200/63	3"-6"	V= 4.23	A5m	G16R	G16/.7B	9/.5	098-02E	B	2d-Am std		fine
200/32	"	"	"	"	"	"	"	A	"		sl wk
							098-02E				
200/40	2"-3"	7.55	K0	G16R	G16/.7B	131.5	098-02E	B	RSCVn-Fgi		
300/192	2"	9.31	F4	G16R	G16/.7B	18/.5	098-02-e	A	RS CVn/Fgi		v sl wk
							098-02-E				
400/89	2"	V=5.76	dF6	G16R	G16/.7B	13/.5	098-02-e	B	RS CVn/Fgi		fair
400/91	"	V=5.76	dF6	G16R	G16/.7B	13/.5	098-02-e	A	RS CVn/Fgi		fair
400/91	"	V=5.76	dF6	G16R	G16/.7B	13/.5	098-02-e	B	RS CVn/Fgi		fine
				"	"	13	[II a]	A	Temp 36°F	set 100R	v sl to faint
50°F	Set	80R						B			
				098-02	4m DIM		68°F	A	18166		
								B			
								A			

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Mon - Tues

Date Apr. 24-25. 1978 Observers J.m. - F.gi

Emulsion Batches: ?
098-02E (30097) - 24048
*098-02e 30097 - 22048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42559	HD106677	12 11.0	+73 07	19 50	21 06	1 16 E	+72 40	Fe Arc none	4-6-5
42560	HD107760	12 17.8	+73 48	21 12	23 50	1 22 W	+73 22	Fe Arc NONE	3-3-3
42560T	SPOT Calib for 42559 -63.			15 min @	15V D3 4810	8V D1 Hα	8V D2 5450		
42561	BD+36° 2344	13 06.0	+36 28 0	23 52	02 37	3 22 W	+36 02	Fe Arc none	3-3-3
42561T	SPOT Calib for 42560			15 min @	15V D3 4810	7V D1 Hα	7V D2 5450		
42562	HD 163930	17 53	+15 08.9	02 45	04 18	0 15 W	+15 08	Fe Arc NONE	3-3-3
42563	HD 161096	17 38.5	+04 37	04 22	04 29	0 41 W	+04 34	Fe Arc NONE	4-3-4
42563F	Focus Test							11	30-30

Spectr. Temp
Focus ≈ 90
Spectr Temp

Exp Mr	Seer
4m/12s	
80m/85	
80m/90	
80m/100	
200m/50	

Spectr. Temp. +50°F ..... Dome Temp./Hum +48°F / 50% Transparency Conditions . Fine ... Slight haze .....

Focus -7..90R .....

Spectr. Temp. +46 °F ..... Dome Temp./Hum 49°F / 62% 14

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
rc e	46-5	400/128	1-2"	V= 5.42	K0	G16R	G16/.7B	13/.5	098-02E	A	RSCVn-Fgi		
e	3-3-3	800/185	2"	B= 9.0	G5	G16R	G16/.7B	18/.5	098-02-e*	B	RSCVn/Fgi		
									09802E				
e	3-3	800/190	2-3	V= 8.4	F4	G16R	G16/.7B	18/.5	098-02e*	A	RSCVn/Fgi		
									098-02e*				
e	3-3	800/200		V=7.4	F4	G16R	G16/.7B	18/.5	098-02-e*	B	RSCVn/Fgi		v sl wk
r	4-3-4	200/50	3"	3.93	K2 III	G16R	G16/.7B	13/.5	098-02e	A	STD VB2		v sl str
	3-3					"	"		LIIaJ	B	Temp 46°F Set 90R		
							09802		19	230			
							09802*		21	183			

15 #1

Tues-Wed

Date Apr. 25-26 / 1978 ... Observers ZA-Tm / KK-Tq .....

Emulsion Batches:
III a F-E 23117 - 24048
098-02E 30097 - 24048
IIa O-C 23087 - 17048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Focus / Spectr. Temp.
42564	HR 3572 = α CnC	8h 53m	+12° 51'	19 59	22 12	3 12W	+12 01	Fe arc Overlap	13-13-13	200/13.9 2-9
42564F	Take before 42564	Focus Test			in in / out out			Fe Arc None	30-30	
42564T	Spot Cal'n for	42564.		15 min	@ 7V	D4 5100	D2 Hα D3 5450			
42565	HD 106677 = HR 4665	12h 11m	+73° 07'	22 17	23 05	00 48 W	+72 42	Fe arc	4-4-4	100/99
42565T	Spot Cal'n for	42565-66.		15 min	@ 15V D3 4810	7V D1 Hα	7V D2 5450			
42566	HD 106677 = HR 4665	12h 11m	+73° 07'	23 06	00 00	01 43W	+72 42	Fe arc	4-4-4	100/112
42567	HD [illegible]	14489	+19 33	00 10	00 47	0 07E	?+15 16	Fe arc ND 1.10	8-8-8	100/70
42568	HD 124897	14 111	+19 42	00 52	00 53	0 36W		"	12-12	90/16
42569	"	"	"	00 55	00 56	0 39W		"	12-12	90/16
42570	HDE 226868 Cyg X-1	19 54.6	+34 56	01 06	04 26	1 27E	+35 11	Fe Arc ND 1.10	6-7-6	800/34
42570T	Strip Cal' for	42564				3min				
42570T2	" "	42565-66.				90 sec				
42570T3	Spot Cal'n	for 42567-70		15 min	@ 15V	D4 3900	D? D2 4810			
42570T4	strip Cal'	for 42567-70				90 sec				
42571	HD 172167 Vega	18 33.6	+38 41	04 30	04 32	0 06E		Fe Arc none	8-8	40/36
42572	"	18 33.6	+37 41	04 33	04 35	0 03E		"	8-8	40/37

Spectr. Temp. 53°F ..... Dome Temp./Hum. +50F/.60% Transparency Conditions ..Very good..-sl.hazy.....

Focus .....90R.....

Spectr. Temp. ..... Dome Temp./Hum. +43°/65% 16

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	13-13-13	200/368	2"-5"	4.23	AmII	G16R	16/.7B	9/.5	IIIaF-E	A	Zd-Dm Std	UV filter in	v sl wk
	30-30					G16R	G16/.7B	9	IIIaJ	B	Temp 53°F set 90R		sl to red
									IIIaF-E				
		100/99	2"-3"	5.42	KO	G16K	G16/.7B	13/.5	098-02E	B	RSLVm Fgi		fine
									"				
	1 4-4	400/117	2"-3"	5.42	KO	G16K	G16/.7B	13/.5	098-02E	A	RSLVm Fgi		v sl str
	8-8-8	400/70		6.84	dK1	G12	G12/.7B	13/.5	IIaO e	B	Asm-Sp/KK		fine
	12-12	40/16				"	"	13/.5	"	A	Std Vel	Focus 90R	v sl str
	1 2	40/16				"	"	13/.5	"	B	Std Vel	Focus 40R	v sl str
	6-7-6	800/94	3"-2"	9.71	09.706	"	"	18/.35	"	A	SB Blu		narrow v sl wk
									IIIaF-e				
									09S-02E				
									IIaO-e				
									"				
	8-8	40/38	2			G12	G0/.7B	9/.5	IIIaJ-e	B	Std Vel	Focus 90R a Lyn	sl str
	8-8	40/37	2			"	"	"	"	A	"	Focus 40R	sl str

17 H2

Date ..... Observers .....

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mir	Seen
42573	HD 172167 Vega	18 33.6	+38 41	04 37	04 39	0 01W		Fe arc	8-16	4"/30	
42573F								4	12-15		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..46°F..... Dome Temp./Hum. .42°F./65%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/80			A0V	G12	G12/.498	9/.5	IIaJ	A	STVel	140R obl IIaJ	v sl str
5 in in/out out				"	"	9	"	B	46°F	90R	v sl Tr Blue
					IIa0 6 4m Dig 68°F			20 166			
					IIIaF			11 200			
					IIaJ 5m Dig 68°F						
					098			18 152			

#1

19

Date April 26-27/1978 ..... Observers Zd.-T.n. / Fgi.-T.n. .....

Emulsion Batches:
IIa0-e 23087 - 17
IIIaF 23117 - 24
IIIaJ-e 01126 - 05048
098-02 E 30097 - 26048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42574	HD 47105 (yCem)	6h 31.9	+16° 29'	19:45	19:52	3 17 W	+16° 29	Fe Arc U.V.	12-12
42574T	Spot Calib for	42574		15 min @ 15V	D4 3900	D3 4300	D2 +810		
42575	HR 3572 α Cnc	8h 53m	+12° 51'	19:59	22:26	3 31 W	+12° 00	Fe Arc U.V.	11-11-11
42575T	Spot Calib for	42575		15 min @ 7V	D4 5100	D2 Ha	D3 5450		
42575T2	Strip Calib For	42575			3 min				
42576	HD 91316 = g Leonis	10h 27m.5	+9° 49'	22:31	23:07	2 37 W	+9° 26'	Fe Arc none	4-4-4
42577	"	"	"	23:08	23:26	2 56 W	"	"	4-4-4
42578	"	"	"	23:27	23:35	3 05 W	"	"	5-5-
42578T	Spot Calib for	42576-78.		15 min @	19.5V D4 3900	15V D4 4300		15V D4 4810	
42578T2	Strip Calib For	42576-78.			3 min				
42579	BD +36° 2344	13h 06.0	+36° 28	23 44	02 45	3 37 W	+36° 05	Fe Arc NONE	3-3-3
42579T	SPOT Calib for	42579-82		15 min @	15V D3 4810	7V D1 Ha	7V D2 5450		
42580	HD 146361	16 10.9	+34 07	02 49	03 21	1 10 W	+33 57	Fe Arc NONE	4-4
42581	HD 146361	16 10.9	+34 07	03 22	03 55	1 48 W	+33 57	Fe Arc NONE	4-4-4
42582	HD 146361	16 10.9	+34 07	03 56	04 28	2 16 W	+33 57	Fe Arc NONE	4-4-4
42583	Focus Test	for G16R						Fe Arc	

Spectr. Temp
Focus
Spectr. Temp.

Exp Mtr	Seeing
-9/22	3"
Dec/13/78	3"
1/-1/79	3"
1/-1/79	
1/-1/79	
1/-1/79	
1/-1/79	
1/-1/79	
1/-1/79	
1/-1/79	
1/-1/79	
1/-1/79	

Spectr. Temp. 53°F Dome Temp./Hum. 50°F / H=55% Transparency Conditions Fine - slt haze

Focus 8.0R

Spectr. Temp. 45°F Dome Temp./Hum. +39°F / H=72%

IIIJF 15 200
IIJO 5½ 20 161
098 02 5½ 21 200
17 256

20

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program III J	Remarks	Quality
40/32	2"	1.93	AO II	G12	G12/.7B	9/.9	IIaO-E	A	Std Stars - Elm		V sl str
							"			"	
200/373	2"-3"	4.23	Am II	G16R	G16/.7B	9/.5	IIIaF-e	B	Zd - Am Std	UV-filtering	
							IIIaF-e			"	
							IIIaF-e			"	
200/259	3"-5"	3.85	B1 Ib	G12B	G0/7B	13/.5	IIIaJ-e	A	std - Elm	2x normal	
200/127		"	"	"	"	"	"	B	"	normal	fine
200/62		"	"	"	"	"	"	A	"	½ normal	fine
							"			"	
							"			"	
300/188	2-3'	9.31	F4	G16R	G16/.7B	13/.5	C9B-02-e	B	RS CVn/Fgi	some tr. - bad → lose	s/wk
							"			"	
400/99	3"	V=5.76	dF6	G16R	G16/.7B	13/.5	"	A	RS CVn/Fgi		
100/98		V=5.76	dF6	G16R	G16/.7B	13/.5	"	B	"		
400/100		V=5.76	dF6	G16R	G16/.7B	13/.5	"	A	"		fine
				"	"	13	IIIaJ-e	B	Temp 45°F	set 80R	V sl blue

21 Thurs-Fri

Date Apr 27 28 1978 Observers Fg. - Tu. / Rm. - Tu.

Emulsion Batches:
098-05 30097-26048
IIa0-E 23087-17013
IIIa-J-E 01126-27048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
42583F	Focus Test					2 0W	+57	Fe Arc none	7-7
42583	HD 65626	7h 54.5	+57 33	20 02	21 14	3 18W	+57 24	Fe Arc NONE	4-4-4
42584	HD 65626	7h 54.5	+57 33	21 17	22 48	4 53W	+57 24	Fe Arc NONE	4-4-4
42584T	Spot Calib for 42583 -87%				15 min	15V D3 @ 4810	7V D1 Hα	7V D0 5450	
42585	HD 118216	13h 30.3	+37° 42	22 52	23 11	0 17E	+37 21	Fe Arc NONE	4-4-4
42586	HD 118216	13h 30.3	+37 42	23 12	23 38	0 09W	+37 21	Fe Arc NONE	4-4-4
42587	"	"	"	23 40	00 09	0 41W	"	"	4-4-4
42588	HD 163506	17h 51.4	+26° 4	00 20	01 31	02 17E	+26 07	Fe Arc HD 1-0	8-7-7
42588T	Spot Calib for 42588				15 min	@15V D4 3900	D3 4300	D2 4810	
42589	HD [illegible] SU Cyg	19h 40.8	+29° 01	01 35	03 52	01 25E	+29 16	Fe Arc HD 1-0	7-7-7
42589T	Spot Calib for 42592 -94%				15 min	V175 D4 @ 3980	15V D4 4300	15V D2 4810	
42590	HD 161096	17 38.5	+4 37	03 58	04 10	+0h 39W	+4° 39	Fe Arc NONE	14-14
42591	HD 172167 Vega	18 33.6	+38 41	04 18	04 19	0h 10E	+38 41	Fe Arc NONE	14-14
42592	"	"	"	04 20	04 22	0h 07E	"	Fe Arc none	8-8
42593	"	"	"	04 23	04 29	00h 00	"	Fe Arc NONE	8-8

Spectr. Temp. +54°F ..... Dome Temp./Hum. +50°F / 60% Transparency Conditions ..... thin cloud .....

Focus .... 80R .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

22

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Spin out out				G16R	G16/.7B	13	IIIaJ	B	Set 80R - +54°F	cor - Fair
400/100	2-4"	7.1	G0	G16R	G16/.7B	13/1.5	098-02-e	A	RS CVn/Fgi	cloud	slak
400/75	"	7.1	G0	G16R	G16/.7B	13/1.5	098-02-e	B	RS CVn/Fgi	thick cloud	v slak
							"				
400/112	3"	5.3	F2IV	G16R	G16/.7B	13/1.5	098-02-e	A	RS CVn/Fgi		VS/
400/110	"	5.3	F2IV	G16R	G16/.7B	13/1.5	098-02-e	B	RS CVn/Fgi		
400/114	"	"	"	"	"	"	"	A	"	100R like 88? Prob. 1.4 - 83	"
400/112	3"-5"	5.3	F2IV	G12N	G12/.7B	13/1.5	IIaOE	B	Capt/Evans		fair
							"				
800/269	2"-6"	6.3-7.7	F0-G1	G12N	"	18/1.5	IIaOE	A	Capt/Evans		slak
							IIIaJ-e				
40/13"		3.93	K0III	G12N	G12/.7B	9/1.5	IIIaJe	B	shift		Fair
40/9		0.04	A0V	"	"	9/1.5	"	A	Test ff	Coll Focus set to 140R	"
40/25		0.04	A0V	"	"	"	IIIaJ-e	B	"	Coll Focus 140R	Poor
40/27		"	"	"	"	"	IIIaJe	B	"	Coll Focus 90R	"

23 Thurs - Fri

Date Sept 27-28 cont Observers Rm - Tu

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
42594	Vega α = HD172167	18h 33.6	+38° 41	04h 32	04 34	00h 05W	+38° 48	Fe Hrc [illegible]	8-8	4½/25	
42595	"	"	"	04h 35	04h 36	00 07W	"	Fe Hrc [illegible]	H-14	4½/16	
42595F	Focus Test for G12N							Fe Hrc [illegible]	10-10		

Spectr. Temp.

Focus .....

Spectr. Temp.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/25		0.04	AOI	G12N	G12/.7	9/5	IIIaJe	B	Test KK	40R Focus	✓
40/10		"	"	"	"	9/5	IIaJE	A	Test KK	40R Focus	IIIaJ ?
						9	IIIaJ-E	B		Temp 46°F Setat 90R cent sl Blue	
									KK # 1	Put Fresh IIaO in Vac	
					IIIaJ	5 1/2	68°	11	230		
					IIaO	5 1/2	68°	18	136		
					098	5	65°	19	185		

25 Fri - Sat

Date Apr. 28-29, 1978 Observers Ly - Tm

Emulsion Batches:
Maj-E 01126-27048
Min-B 23087-28048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42596F	Focus Test for	612N	in in / out out			3 30W	+16	Fe Arc None	11-11
42596	HD47105	06 31.9	+16 29	19 54	19 59	3 32W	+16 31	Fe Arc No Filter	4-4
42597	HD62044	07 37.0	+29 07	20.08	20 57	3 24W	+29 01	Fe Arc NO-1.1	5-20-5
42597T	Spot Calib for	42596, 42601, 04			15 min @	17.5 V D4 3900	15V D4 4300	15V D4 4X0	
42598	HD72208	08 26.5	+10 09	21 03	22:21	3 59W	+9 55	Fe Arc NO-1.0	8-8
42598T	Spot Calib for	42597-	42600, 02-3, 05.		15 min @ 15V	17 V D4 3900	D3 4305	D2 4X0	
42599	HD118216	13 30.3	+37 42	22 25	22:50	0 34E	+37 22	Fe Arc	10-10-10
42600	HD131511	14 48.9	+19 33	22:54	23:43	0 59E	+19 18	1	4-8-8
42601	HD134092 (α² CrB, 3rd)	15 35.6	+36° 58'	23:46	00:13	1 16E	+36 46	Fe Arc No Filter	4-4
42602	HD163506	17 51.4	-26° 04	00:30	01:00	2 45E	+26 06	Fe Arc NO-1.1	5-10
42603	HD157482	17 18.5	+40 04	01:02	01:52	1 19E	+40 03	Fe Arc NO-1.1	10-10
42603T	Strip Calib for	42597-42600, 02-3, 05.					90sec		
42604	HD175426	18 50.2	+36 51	01 55	03:24	1 19E	+37 00	Fe Arc No Filter	4-4
42604T	Strip Calib for	42596, 42601, 04,				3 Min			
42605	HD157482	17 18.5	+40 04	03 27	04:29	1 18W	+40 02	Fe Arc NO-1.1 Fe Arc	10-10-10

Spectr. Temp.
Focus 70R
Spectr. Temp

Exp. Mtr	Seen
3/34	1-2
200/47	4
300/100	1-2
200/55	3
400/62	4
400/62	4
400/81	3
400/100	3
400/125	3
400/100	3

Spectr. Temp. 55°F ..... Dome Temp./Hum. 52°F / 50% Transparency Conditions ... Fine ... v sl haze

Focus .. 7.0 R .....

Spectr. Temp. 50 °F ..... Dome Temp./Hum. 45°F / 60%

26

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				G12N	G12/1.7B	9	IIIaJ o/N	A	Temp 54 55°F set 7.0R		v sl red
40/34	1-2	1.9	A0 IV	"	"	9/5	IIIaJ-e	B	Asm Sp - KK		v sl str
200/147	"	~5.4	K1 III	G8	G16/-.25B	9/5	IIaJ-E	A	H+K Bin - Ly		fine
							IIIaJ-e			✓	
400/100	1-3"	6.5	A0p	G12N	G12/1.7B	13/5	IIaO-E	B	Sp Bin - Ly		fine no fog
							"			✓	
200/55	1-3"	5.3	F2 IV	G12N	G12/1.7B	9/5	"	A	RSCun - Ly		v sl str
400/102	"	6.84	dK1	"	"	13/5	"	B	H+K Bin - Ly		fine
400/220	"	4.95	B7 V	"	"	13/5	IIIaJ-E	A	Sp Bin Bl/Ly ✓		
400/101	3"	~5.8	F2 Ia	"	"	"	IIaO-E	B	Cyl - Emis		v sl str
400/100	2-3	~6.0	dF8	"	"	9/5	IIaO-E	A	H+K Bin - Ly		fine faint emis
							"			✓	
200/125	3"	5.2	B3	G12N	G12/.7B	13/5	IIIaJ-E	B	Sp Bin - Ly ✓	cloud at 3:30 → 3h	no fog v str/wk
							"				
400/100	3-5	~6.0	dF8	G12N	G12/1.7B	9/5	IIaO-E	A	H+K Bin - Ly	cloud	fine
					all 5h						

27 2 Large Tour groups Sat-Sun

Date Apr 29-30 1978 Observers BK-Tn

Emulsion Batches: IIa0-e 23087-28046 IIa0-e* 23087-29048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42606	HD 87822	10 02·5	+32 06	22 36	00 04	4 10W	+31 50	Fe Arc ND 1·10	8-8-8
42606T	Spot Cals for 42606-08.			15min	@15V D4 3900	D3 4300	D2 4810		
42607	HD 136202	15 14·2	+ 2 09	0 08	0 55	0 09E	+1 58	Fe Arc ND 1·10	8-8-8
42608	HD 146361	16 10·9	+34 07	0 59	1 50	0 08E	+34 00	4	8-8-8
42609	HD 155103	17 04·5	+36 04	1 54	2 30	0 23E	+36 02	11	8-8-8
42609T	Spot Cals for 42609-11.			15min	@15V D4 3900	D3 4300	D2 4810		
42610	HD 153882	16 57·0	+15 05	2 38	3 44	0 58W	+15 03	Fe Arc ND 1·10	8-8-8
42611	HD 197621	19 46·2	+10 10	3 47	4 30	1 06E	+10 26	n	8-8
42611F	Focus Test		in-n focus/out					Fe Arc none	3-3

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec

Spectr. Temp. 16°F Dome Temp./Hum. 47°F / 67% Transparency Conditions Fine slhaze

Focus 90R

Spectr. Temp. 36°F Dome Temp./Hum. 31°F / 67% 28

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/100	4-2"	6·6	F5	G12N	G12/78	13/5	IIaO-E	A	Waterloo		fine no flex
							"		"		
200/53	3-5"	5·6	F8	G12N	G12/78	13/5	"	B	Waterloo		v sl sm no flex
400/105	"	6·2	F8	"	"	"	"	A	"		v sl sm no flex
400/86	4"	5 7	A5	"	"	"	IIaO-E*	B	"		v sl sm
							"				
400/83	4"	6 3	Ap	G12N	G12/78	13/5	"	A	"		v sl wk
200/50	6"	5·6	F8	"	"	13/5	"	B	"		
				"	"	13	"	A	Temp 35° = Sc + 90R		
				IIaOe 5½" DIG 6°							
				IIaOc*							

Comparison Filter Exp.

29

Date Apr 30-May 1 1975 Observers Fay-Tn / Tn

Emulsion Batches:
IIIaJ-C 01126 21048
0.98-02E 30097-26048
IIa0-e 23087-29048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42612F	G12N Focus Test					3h 30W	+16		
42612	HD 47105	6h 31.9	+16 29	19 55	20 02	3 42W	+16° 36		
42613	HD 107760	12h 17.8	+75°48	20 15	00 04	2 00W	+73° 30		3-3-3
42613T	Spot Calib for 42612.			15 min @	175V D4 3900	15V D4 4300	15V L4 4810		
42614	BD +36° 2344	13h 06.0	+36 28.0	00 08	03 05	4 14W	+36 10		3-4-3
42614T	Spot Calib for 42613-14.			15 min @	15V D3 4810		7V D1 7V Hx	D2 5450	
42614F	Focus Test G16R					3 0W	+20°		
42615T	Spot Calib for 42615-20.			15 min @ 15V	D4 3900		D3 4300	D1	
42615	HD 124897 B00	14 1h1	19 42	03 21	03 25	3 28W			C-6
42615A	Full Aperture		outer & inner						
42616	B00			03 29	03 33	3 36W			6-6
42616A	Full Ap		outer & inner						
42617	B00			03 40	03 52	3 55W			6-6
42617A	Full Ap		outer & inner						
42618	B00		Approx time	4 01	4 9	4 12W			14-14
42618A	Full Ap								

Spectr. Temp. +38°F ..... Dome Temp./Hum. +34°F / 60% Transparency Conditions Very Good .....

Focus ... 110R .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

note kk. – IF this 098 batch lasts (no, perhaps 098 can be pushed further) 30

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		in in	out out			G12N	G12/.78	9	IIIaJ old	B	Set 110R Temp	38°F	V sl blue
		40/33	2"	1.9	AO IV	G12	G12/.78	91.5	IIIaJ-c	A	Asm B.m/RL		V sl str
	3-3	800/200	2"	9.0	G5	G16	G16R/.78	18/1.5	098-02-c	B	RS CVn/Fgi		fine
									IIIaJ-e			✓	
	5-4	800/190	2-3"	V= 8.4	F4	G16	G16R/.78	18/1.5	098-02-e	A	R CVn/Fgi	gusty, a'tinos, cloud at end	exp sh interval
									098-02-e			✓	
		in in	out out			G16	G16R/.78	9	098-02-e	B	set 110R Temp	+32°F	
									IIIaJ-E			✓	
	6-6	40/28				G8	G16/.258	9/1.5	"	A	set 110R	thin cloud	
	12-12								"	A	Set 110R	no sh. fl	
	6-6	40/28							"	B	Set 160R		
									"	B	Set 160R	no sh. fl	
	6	40/18							"	A	Set 60R	cloud	fine
									"	A	Set 60R	center shift -2.5	
	14	40/10				G12N	G12/.78		"	B	Set 60R		
	30-25						"		"	B	Set 60R	cent. shift -3.0	

#2

31

Date ..... Observers .....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
19	α Boo		Time: Approx	4 20	4 25	4 28W		Fe Arc NO 1-10	14-14
19A			"						25-25
20	α Boo		"	4 34	4 44	4 47W			14-14
20A									25-25
42620F	Focus Test							Fe Arc NO 1-10	1-10

Spectr. Temp

Focus .....

Spectr. Temp

Exp. Mtr	Sec
45/10	
5/0	
Note	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ....32°F..... Dome Temp./Hum. +27°/75% 32

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/10	set 160R			G12N	G12/178	9/5	IIaO	B	Thru most cloud		fair
	Set 160R				"	9	"	B	some snow if seen.	counter -3.0	
40/10	set 110R				"	9/5	"	B		comp	some st wk
	set 110R				"	9	IIaJ011	B		counter -2.0	
					"	9	"	A	set 110R Temp +32°F		blue
note For G8 Tests I'm not abs certain that Lower tiltpin was in contact with Grating											
					all	5½" Dig	68°F				

Comparison /Filter Exp.

33 MON/TUES

Date MAY 1/2 1973 Observers Fg-Tn/Tn

Emulsion Batches:
IIaJ-e 01126 - 05048
093-02-e 30097 - 01058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42621F	NGC Focus Test								
42621	HD 47105	6 31.9	+16° 29	19 51	19 55	3 40 W	+16 27		
42621T	Spot Calc for 42621.			15 min @	17.5V D4 3900	15V D4 4350	15V D4 4810		
42622	HD 65626	7h 54.5	+57° 33	20 04	22 06	04 26W	+57 21		
42622T	Spot Calc for 42622		31.	15 min @	15V D3 4810	7V O1 Hα	7V D2 5450		
42623	HD 118216	13h 30.3	+37° 42	22 11	22 28	00 46E	+37 18		
42624	HD 118216	13h 30.3	+37° 42	22 29	22 47	00 26E	+37 18		
42625	HD 118216	13h 30.3	+37° 42	22 48	23 04	00 09E	+37 18		
42626	HD 146361	16h 10.9	+34° 07	23 08	23 37	02 15 E	+33 56		
42627	HD 146361	16h 10.9	+34° 07	23 38	00 11	01 42E	+33 56		
42628	"	"	"	00 12	00 40	1 13 E	"		
42629	HD 163930	17 53	+15 09	00 47	02 13	1 22E	+15 12	"	3-3-3
42630	"	"	"	02 14	03 21	0 15E	"	"	3-3-3
42631	"	"	"	03 21	04 27	0 51W	"	"	3-3-3

Spectr. Temp. 38°F ..... Dome Temp./Hum. 39°F / H=67% Transparency Conditions Clouds home .....

Focus ... 120R .....

Spectr. Temp. 37°F ..... Dome Temp./Hum. 34°F / H= 80% Very clear. t. ll dawn 34

Comparison /Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					G12N	G12/.7B	9	IIIaJ old	B			
	42/28	3'-5"	1.9	AD II	G12N	G12/.7B	9/1.5	IIIaJ-e	A	Aem Bin/K		v sl str
								IIIa J-e				
4-11	400/126	2-3	7.1	G0	G16	G16R/.7B	13/5	098-ace	B	RS CVn/Fgi aurora		
								"	both	Axes too long		
	400/129	1-2	V= 4.95	F2 III	G16	G16R/.7B	13/1.5	"	A	RS CVn/Fgi		
	400/123	"	V= 4.95	F2 III	G16	G16R/.7B	13/1.5	"	B	RS CVn/Fgi		
	400/121	"	V= 4.95	F2 III	G16	G16R/.7B	13/1.5	"	A	RS CVn/Fgi		
	400/126	2-3	V= 5.76	dF6	G16	G16R/.7B	13/1.5	"	B	RS CVn/Fgi		
	400/122		V= 5.76	dF6	G16	G16R/.7B	13/1.5	"	A	RS CVn/Fgi		
	400/127		"	"	"	"	"	"	B	RS CVn/Fgi		
3-3	400/120	2"	V= 7.4 max	F4	"	"	18/1.5	"	A	"	Aurora Super, All over	fine
2-2-3	400/110	2"	"	"	"	"	"	"	B	"		
3-2-3	400/110	1-2-3"	"	"	"	"	"	"	A	"		esp good guiding!
						098	5"	680				
						IIIaJ	5"	680				

35 TUES/WED

Date MAY 2/3. 1977 Observers Fqi-Tn/Tn

Emulsion Batches:
098-02E 30097-01058
IIaO-E 23087-1D048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42632	HD 106677	12h 11.0	+73° 07	20 04	20 41	1 10E	+72 44	Fe Arc ND 1.0	4-4-4
42632T	Spot Calib for	42632-35			15min@	15V D3 4810	7V D1 Hα	7V D2 5450	
42633	HD 107760	12 17.8	+73 48	20 45	23 01	1 05 W	+73 26	Fe Arc	3-3-3
42634	BD+36° 2344	13 06.0	+36 28.0	23 05	01 31	2 47 W	+36 08	Fe Arc NONE	3-3-3
42635	HD 118216	13 30.3	+37 42	01 34	01 53	2 44 W	+37 22	"	4-4-4
42635F	Focus Test	G16R						"	15-15
42635T	Strip Calib for	42632-35,				90 sec			
42636	HD 186688	19 40.8	+29 01	02 02	03 43	1 35E	+29 17	Fe Arc ND 1.0	6-6-
42636T1	Spot Calib for	42636-38,			15min@15V	D4 3900	D3 4300	V2 4200	
42636T2	Strip Calib for	42636-38,					90 sec		
42637	HD 163506	17 51.4	+26 04	03 46	4 09	0 41 W	+26 07	Fe Arc ND 1.0	8-8-8
42638	HD 161096	17 38.5	+4 37	04 13	4 18	1 01 W	+4 39	"	8-8-8
42638F	Focus test	G12B					"	Fe Arc ND 1.0	10-10

Spectr Temp. 7
Focus 110
Spectr. Temp. 4

Exp. Mtr | Seeing

Spectr. Temp. +45°F Dome Temp./Hum. +42°F / 68% Transparency Conditions Excellent
Focus 110.0R getting sl hazy sqrly
Spectr. Temp. +41°F Dome Temp./Hum. +38°F / 70% more Aurora by 0h

36

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100/112	1"	V= 5.42	K0	G16	G16R/.7B	13/1.5	098-02-c	A	RS CVn/Fgi		fine
							"			✓	
300/220	1-2"	9.0	G5	G16	G16R/.7B	18/1.5	"	B	RS CVn/Fgi		fine v sl flare
300/220	1-2"	V= 8.4	F4	G16	G16R/.7B	18/1.5	"	A	RS CVn/Fgi		v sl wk
300/60	2'	V= 4.95	F2 IV	"	"	13/1.5	"	B	"		Fine
in	in/out	out		"	"	13	"	B	Temp 43° F	Set 110R	
							"			✓	
400/	3-4"	6.8 -7.7	F0 -G1	G12	G12/.7B	18/1.5	IIaO-e	A	Ceph-Rm		sl str
							"			✓	
							"			✓	
200/60	2-3"	5.81	F2 Ia	G12	G12/.7B	13/1.5	"	B	Ceph - Fe		sl str
40/13	2	3.93	K0 III	"	"	"	"	A	std vel		v sl str
				"	"	13	IIIaJ old	B	Temp °F	Set 110R	
					098	4 3/4	68°				
					IIaO	5 1/2	68°				

37 WED / THURS

Date MAR. 3/4 1978 Observers Fgj-Ri / Rm-Ri

Emulsion Batches:
098-02-E 30097-02058
IIIa-E 23087-01058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42639	BD+36° 2344	13h 06.0	+36° 23.0	20 08	22 46	00 06 W	+36 07	Fe Arc	3-3-3
						D3150	D1 70	D2	
4263971	spectral for plate	42639 - 43			15min	4810	11α		
42640	HD 118216	13h 30.3	+37° 42	22 49	23 05	00 00	+37 23	Fe Arc NONE	3-4-4
42641	HD 118 216	13h 30.3	+37° 42	23 0[illegible]	23 24	00 20 W	+37 23	Fe Arc NONE	4-4-4
42642	HD 118 216	13h 30.3	+37° 42	23 25	23 41	00 36 W	+37 23	Fe Arc NONE	4-4-4
42643	HD 146361	16h 10.9	+34° 07	23 45	00 16	01 26 E	+33 59	Fe Arc NONE	4-4-4
[illegible]	HD [illegible]	19h [illegible]	+29° 01	00 23	01 59	03 15 E	+29 19	[illegible]	[illegible]
✓4264471	spectral for plates	42644-48		15min	@ 13 1/2	D4 3900	D3 4300	D2 4100	
[illegible]	HD 163[illegible]06-37 Her	17h 51.9	+26° 4	02 03	02 30	00 [illegible]E	+26 07	Fe Arc NONE	8-8-8
42646	HD 161096	17h 8[illegible].5	+4° 37	02 34	02 46	00 X33E	+4° 39	Fe Arc NONE	12-12
42647	HD 157482	17h 18.5	+40° 04	02 53	03 33	00 44 W	+40 03	Fe Arc NONE	8-8-8
4264771	stop cal for plate	42644-48			90sec				
42648	HD 147[illegible]35	16h [illegible]-1	+3[illegible]° 34	03 38	04 24	02 32W	+3[illegible] 39	Fe Arc NONE	4-8-8
42648F	Focus Test G12B						11	Fe Arc [illegible]	5-[illegible]

Spectr. Temp. +48°F ..... Dome Temp./Hum. 5°C/55% Transparency Conditions clear & Hazy .....

Focus ..... 100 .....

Spectr. Temp. ..... Dome Temp./Hum. 2°C/68% 38

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/220	2-3	V= 8.4	F4	G16	G16R/.7B	18/1.5	098-02-e	A	RS CVn/Fgi		Sharp vs/wk
							098-02e				
400/115		V= 4.95	F2 IV	G16	G16R/.7B	13/1.5	098-02-e	B	RS CVn/Fgi		Fine
400/111		V= 4.95	F2 IV	G16	G16R/.7B	13/1.5	098-02-e	A	RS CVn/Fgi		Fine
400/110		V= 4.95	F2 IV	G16	G16R/.7B	13/1.5	098-02-e	B	RS CVn/Fgi		Fine
400/107		V= 5.76	dF6	G16	G16R/.7B	13/1.5	098-02-e	A	RS CVn/Fgi		
800/301		7.7	F0-G1	G12N	G12N/.7B	13/1.5	IIaOE	B	Cyg/Fgi		Very Fine
							IIaO-E				
400/120		5.82	F2 Ia	G12N	G12N/.7B	13/1.5	IIaOE	A	Cyg/Fgi		Fine
40/13		3.93	K2 III	G12N	G12N/.7B	13/1.5	IIaOE	B	Std Vel		Fine
800/160	2-3	6.22	dF8	G12N	G12N/.7B	9/.3	IIaOE	A	SB/Blu	comp sl wk	Fine
							IIaO-E				
400/43		6.8	A3 V	G12N	G12N/.7B	13/1.5	IIaO-E	B	SB/Blu		Fine sharp
in in/out out						13	IIaOE	A	Temp 40°F	Set 100 K	

39 9 hrs - Fri

Date . May 4-5 1978 Observers . Ri

Emulsion Batches:
IIIaJ E 01126-27048
IIaD-E 23087-01058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42649	HD 139892	15h 35.5m	+36° 58'	23:18	23:46	01h 19m E	+36° 48'	FeARC NO FILTER	4-4s
4264971	spectral cal fn plate 42649			15 min	17.5 V D4 3900	15 V D4 4300	15 V D4 4810		
42650	HD 151676	16h 43m 42s	-15° 30'	23:58	00:35	01h 38m E	-15° 32'	FeARC N.D. 1.10	7-77
42651	HD 163506 (89 Her)	17h 51.4m	+26° 04'	00:43	01:31	01h 51m E	+26° 09'	A	8 16
4265191	spectral cal fn plate 42650 -			15 min @ 150 volts		D4 3900	D3 4300		
42651F1	focus test	on 42649						FeARC NO FILTER	40-10
4265172	step cal fn plate	42649.		180 sec					
4265173	step cal fn plate	42650-51.		90 sec					

Spectr. Temp
Focus
Spectr. Temp

Exp Mtr | Sec

Spectr. Temp. ....44°F..... Dome Temp./Hum. 6°C....72%. Transparency Conditions .....

Focus .....1102.....

Spectr. Temp. ....44°F..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/220	2-3	9.95	B7II	G-12	G12/,78	13/.5	IIIaJ-E	A	SB Bl/Ly		
							IIIaJ-E				
800/136		6.19	A3	G-12	G-12/,78	18.5	IIIa-E	B	Fe1 Bl - Bl	dark h sat	
400/80		5.81	F2Ia	"	"	13.5	"	A	Cpl - Fe	"	slit slightly
							IIIa-E				
	temp - 440P			1102		9	IIIaJ-E	B		kk	
							IIIaJ-E			could you please	
							IIIa-E			push to IIIa-O	

Comparison
pe Filter Exp.

41 ie night of May 6-7

Date Sun. May 7 1978 Observers A.-R.

Emulsion Batches:
IIaO-E 23087-01058
IIaO-E 23087-05058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42652	HD 157482	17 18.5	+40 04	01:01	01 49	00h 51 E	+40 03	FeAr. ND=1	
42652T1	spectral fn plate 42652			15min @ 15 Volts		D4 3900	D3 4300	D2 4810	
42652T2	step cal fn plate 42652				90sec				
42653	HD 131511	14 18.9	+19° 33	01 53	02: 58	00h 47m W	+19°20	FeARC ND 1.1	8-8
42653T1	step cal fn plates 42653-56				90sec				
42653T2	spectral fn plates 42653-56				15min @ 15 Volts	D4 3900	D3 4300	D2 4810	
42654	HD 172167 (Vega)	18 33.5	+38° 41	03 02	03 04	00h 49E	+38 50	Fe Arc ND 1.1	15-15
42655	HD 175426	18 50.2	+36 51	03:08	03 34	00 36E	+37 01	Fe Arc ND 1.1	45
42656	HD 157482	17 18.5	+40° 04	03:38	04 21	01 41W	+40 03	"	10
42656T1	[illegible]	[illegible]						[illegible]	

Spectr. Temp.
Focus
Spectr. Temp

Exp. Mtr.	Sec
30	
10	

Spectr. Temp. ....45..... Dome Temp./Hum. ..7°C.....100% Transparency Conditions ..cloud rond 1/2 of 12 45 T1 — 9T

Focus ....110R.....

Spectr. Temp. ..... Dome Temp./Hum. ...5°C.....95%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/150	3-4	6.22	dF8	NG12	G12/.7B	9/3	IIaO E*	A	No E Bin-Ly		comp sl wk Fine
							IIaO-E				
							IIaO E				
800/200		6.84	dk1	NG 12	G12/.7B	13/5	IIaO-E	B	H-k Bu-Ly		v sl wk
		5½ @ 68°F		May 9			IIaO-E				
							IIaO-E				
40/28		0.04	AoI	NG-12	G-12/.7B	9/5	IIaO-E	A	Zd Zuf		comp sl wk Fine
400/122		~5.2	B3	"	"	13/5	IIaO-E	B	SB-Ly		comp sl wk Fine
800/151		6.22	dF8	"	"	9/3	IIaO-E	A	H-k Bu-Ly		"
	temp - 45°F			110R		9	IaO E	B			

43

SUN-MON

Date 7/8 MAY 78 Observers Fgi-Ri

Emulsion Batches:
IIIa J-e ... 064 - 05058 (illegible)
098-02E 3099? - 01058
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42657	HD 91316 (pleo)	$10^h 27.5$	$+9^\circ 49$	20 05	20 08	$00^h 20$ W	+9 33	F [illegible]	[illegible]
42658	"	"	"	20 09	20 13	$00^h 26$ W	"	"	4-4-4
42659	"	"	"	20 14	20 21	$00^h 33$ W	"	"	4-4-4
42660	"	"	"	20 22	20 32	$00^h 45$ W	"	"	4-4-4
42661	"	"	"	20 33	20 50	$01^h 02$ W	"	"	4-4-4
42662	"	"	"	20 51	21 11	$01^h 24$ W	"	"	4-4-4
42663	"	"	"	21 12	21 54	$03^h 07$ W	"	"	4-4-
J 42663 71	spot cal for plate 42657-63				15 min @		17.5 V 54 3900	D4 4300	D4 4/3/0
42663 72	step cal for plate 42657-63.				180 sec				
42664	HD 118216	$13^h 30.3$	$+37^\circ 42$	23 04	23 48	$00^h 59$ W	+37 24	[illegible]	4-4-4
42665	"	"	"	23 49	01 05	$02^h 16$ W	"	"	4-4-
42665 71	spot cal for plates 42664, 65.				15 min		D3 4810	150 D1 170	D2 70 5430
42665 72	focus test	out out 1/min						F [illegible]	[illegible]

Spectr. Temp
Focus
Spectr. Temp

Exp Mir Sec

Spectr. Temp. 55°F Dome Temp./Hum. 10°C/82% Transparency Conditions thin clouds

Focus 70R

Spectr. Temp. 50°F Dome Temp./Hum. 07°C/100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/16	2"-3	3.71	B1Ib	G12	G12/17B	13/1.5	IIIaJ-e	A	Test		
200/26		"	"	"	"	"	"	B	"		
200/40		"	"	"	"	"	"	A	"		
200/60		"	"	"	"	"	"	B	"		
200/90		"	"	"	"	"	"	A	"		
200/129		"	"	"	"	"	"	B	"		
200/190		"	"	"	"	"	"	A	"	clouds	
	5½ @ 68°F			May 9			IaJ-E				
							IIIaJ-E				
4100/121		V= 4.93	F2II	G16	G16/17B	13/1.5	098-22-e	B	RS CVn/Fgl		F...
100/121		"	"	"	"	"	"	A	"		F...
	4½ min @67°F			May 11 /Tn			03½-dia				
	temp	50°F		G12	G12/17B	9	IIIaJ-E	B		right on	

Comparison e/Filter Exp

45 wed Thurs

Date 10-11 May 1978 Observers Bat - Tn

Emulsion Batches: IIaOe 23087 – 04058

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42666	HD 124897 α Boo	14 11.1	+19 42	19 55	19 57	03.30E			
42667	HD 96003	10 59.3	+13 12	20 11	22 37	02 30W	+12 55	"	9-7-9
42667T	Spot Calc for 42666 – 70.				15 min @	10V 3900	D3 4230	D2 4616	
42668	HD 138406	15 26.8	+62 05	22 42	00 47	00 15W	+61 54	ND 1.0	1.9-9
42669	HD 156547	17 13.1	+26 00	00 56	02 35	00 16W	+25 49	"	1-6-7
42670	HD 176003	18 53.0	+44 05	02 39	03 51	00 05E	+44 06	"	5-3-9
42670F	Focus Test							no filter	10 0

Spectr. Temp
Focus
Spectr. Temp

Exp Mtr

Spectr. Temp. ...52°F..... Dome Temp./Hum. 12°C 83% Transparency Conditions Good - 2 wks

Focus .....70 R.....

Spectr. Temp. ...46°F..... Dome Temp./Hum. .....

46

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2 of 3	1-2	1	K	G12B	G12/78	9/5	IIaO-E	A	std vel		fine
400/100	2-3	6.75	A	"	"	"	"	B	Ap MR	comps sl wk	Fine
	6 min	@	67°F	mag 11 by Ta			"				
400/90	2-4	6.79	A0	G12B	G12/78	9/5	"	A	Ap MR	comps/wk	Fine
400/98	2	7.04	A1	"	"	13.5	"	B	Am MR	REVERSED TELESCOPE SPEC. TEMP 48°F	Fine
400/100		7.00	A	"	"	"	"	A	Am MR	wrong?	Fine
				"	"	13		B		45°F set 70R cont vs IBlue	

A7

Date June 9-10.178 Observers KK-Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1	NE30 Bulb	Hartman	Focus Test	(South grating covered - Comp Mode)					
2	"	"	(N covered - Stellar mode) →			(S covered - Comp mode)			
3	α Boo			22 12	22 19			NE30	2 min
4	NE30 Hartman Test		(N covered - Stellar mode) 2 min			(S covered - Comp mode)			2 min
5	"	"	(S covered - Comp Mode) 2 min			(N Covered - Stellar mode)			2 min
6	"	"	(N Covered - Stellar mode) 57 30 2 min			(S covered - Comp mode)			3 min
7	"	"	(S covered - Comp mode) 3 min			(N Covered - Stellar mode)			
8	α Boo			23 15	23 19			NE30	2 min
June 10-11 1	NE30 Hartman Test		(N Covered - Stellar mode) 23 2 min			- (S covered - Comp mode)			2 min
2	"	"	(S Covered - Comp mode) 23 2 min			- (N Covered - Stellar mode)			2 min
3	Saturn			20 39	20 46			NE30	2 min
4	4x5 of Slicer grating illumination on G16R grating								4 min
5	Vega using Blue Slicer			00 23	00 25			NE30	2 min / 3 min
5T	Hartman Focus Test of BS.		(S covered - Comp mode) 3 min			(N covered Stellar mode)		1 min	
6	4x5 of Slit Comp on grating								3 min

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

*BS = Blue Slicer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
(N cover with	Stellar mode)			G12B	G12/17B	200u	IIIaJ old	A	(2 min each)	Focus 0 on mark	blank
(2 min	each)			"	"	"	"	A	2 Turns CW	Looking South	blank
	3"			"	"	"	"	A	1 Turn CCW	From Mark	
				G16R	G16/17B	"	098-cold	A	"	" Cent	red
				"	"	"	"	A	1 Turn CW	From 0 Mark Cent	V Fai red
(Found	Penciled Old mark)			"	"	"	"	A	2x5 Turns	CCW From original 0 Mark	Cent Fair blue
				"	"	"	"	B	1 Turn CCW	From last set cent	s blue
								A	Same Focus		
Spec Temp	+62°F			G16R	G16/17B	200u	098 old	A	2 Turns CW	From last set ie 1CW From New 0 Mark	cent vsl blue
				"	"	"	"	B	1 Turn CW	From last	center red
				"	"	"	"	A	Same Focus	∴ go 80 units CCW	
							103aD		Focus set to 40R		
				G16R	G16/17B	*B.S.	098 old	A	Focus set to 40R		Comp wk
				"	"	"	"	A		40R Cent cent	vsl Blue ?
							103aD				

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Date ..... Observers KK / TM

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
7	4x5 of grating scan 200μ slit								1m
8	slit tilt-test 200μ slit							Ne	1m
8T	focus test							Ne	1m-1m
9	slit tilt test 250μ slit							Ne	1m
June 11-12									
10	α Boo	with Blue Cell		22 09	22 13	01 01W		e	11 min
10F	α Boo as Focus Test source			(N cover Stellar) 2min		(S cover Comp) 1min-3min			
11F	α Boo as Focus Test source			(S cover-Comp) Decker in 6min		(N cover Stellar) 6min			
12F	G64 Hartman Focus Test			(N cover stellar) 2min		(S cover Comp Decker in mode) 2min			
13	4x5 of αBoo on Grating 200μ slit								3m
14	Grating illumination, no collimator								30 sec
15	Grating illumination, slicer								3m
16	Slicer after adjustment (1 turn in on East screw)								3m
17	" " " but reset in place			01 08		(S covered/Comp) 20min		(N cover stellar) 5min	

Spectr. Temp.
Focus
Spectr. Temp
Exp. Mtr.
guided
Focus

Spectr. Temp. June 11-12 - 73°F Dome Temp./Hum. ..... Transparency Conditions s.l. hazy .....

Focus ....40R.....

Spectr. Temp. ..... Dome Temp./Hum. .....

II BII 50

Comparison Lamp/Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	m								103aD				
	m								098	B			
	m								098	B		same focus	
	m								098	B			
	11m	guided	2"		K	New G12B	G12/17B	250N	IIIaJ old	B	Focus 40R Temp 73°F	Decker indistinct	
					K	"	"	"	"	A	40R		
					K	"	"	B.S.	"	A	40R Temp 73°F		
						G43	G64/17B	B.S.	098 old		40R Temp 73°F		
	3m								103aD				
	30sec								103aD				
	5m								098 4x5				
	3m								098 4x5				
		Focus Test using Vega				N G12B	G12/17B	B.S.	IIIaJ old	A	60R Temp 72°F		

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Tues-Wed

Date June 13-14 1978 Observers Tom - Kai? - KK

Emulsion Batches:

Plate No.	Object	R.A. ~~1900~~	Declination ~~1900~~	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
** 18F	Hartman Focus Test			#1 (N ⊂ stellar) 30sec	#2 (S ⊂ comp) 40sec				
19F	" "			#1 (N ⊂ stellar) 30sec	#2 (S ⊂ comp) 40sec				
42671	η Boo HD 121370	1900 13h 52.7 / 1900 13 49 55	+18° 30 / +18° 54	21 38	21 43	01 00W	+18 30	Fe Arc none	5-5
71F	Hartman Focus Test			#1 (N ⊂ stellar) 30sec	#2 (S ⊂ Comp) 50sec			"	
42672	* ρ CrB	1900 15 57 13"	+33 36	22 03	22 19	0 30E	+33 21	"	5-5

* Check with Kai to see what star this is.

** Discarded - probably did it wrong. Didn't make sense.

Tony - Fe Arc not well centered on slit area. I wasn't sure what to adjust to improve it.

- The Arcs I got were only a little weak. With present illumination and using 200μ slit, the exposure for a complete arc are: IIIaO-E - approx 18 sec

IIIaJ-old - very approx 1 min

- Fe Arc on East side of stellar area is weak. Check that on realignment of illumination.

Try

→ RA clamp & unclamp electronics still bad, or worse. Difficult to unclamp clamp. -

Spectr. Temp

Focus

Spectr. Temp

Exp Mir Seeing

Comp Chge

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

*Note - Focus For +56°F For G12B is 90R

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Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				G12B	G12/78	200μ	IIIaJ-old	B	set 110R +	58°F not sure of rel pos'n of mask	??
				"	"	"	"	B	Focus-90R		OK
none	4"	3.3	60				IIaO e	A	Focus 90R		Comp slwk str
							IIIaJ-old	A	Focus ~~110R~~ 90R	repeat	right on
	4"	6.0	62				IIaO-e	B	Focus 90R	*hartman mask in #2 posn still	Comp slwk Fine

Could cause accident if someone thinks it's clamped & leaves it.

Tests & adjustments 1st half

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Date June 22-23/78 ... Observers ... T.m .....

Emulsion Batches:
... IIIa-J ... evacuated in N²
... IIa-O ... evacuated
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42673	HD 186791	19 41.5	+10 22	01 36	01 44	0 15E	+10 32	None	
74				01 48	01 53				
75				01 56	02 06	0 07W			
76				02 08	02 21	0 22W			
77				02 23.5	02 30.5	0 37W			
78	HD 186688	19 40.8	+29 01	02 39	02 47	0 51W	+29 11	Fe Arc None	sec 30
79	"	"	"	02 49	03 09	01 13W		"	60 sec
June 23-24 ↓									
80	HD 139892	15 35.6	+36 58	22 08	22 14	0 25W	+	None	
81	"	"	"	22 18	22 54	01 05W cloud thickening			
81F1	Fe Arc in stellar mode - Rough focus last							Fe Arc none	40 sec
F2								"	1 min
F3								"	1 min
F4								"	1 min

Spectr. Temp.
Focus
Spectr. Temp

Exp Mr. sec

40/9
4 21
40/21
40/23
40/23
40/—
40/50 good
focus good
40/20
40/42

Spectr. Temp. +64°F ..... Dome Temp./Hum. +60°F ... 89% · Transparency Conditions . Photometric .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

** Coudé Focus prel 70R

note Exp meter at 900V for 73-77, 1000V after

54

Exp. Mtr. **	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/9	2" ??	415	K3II	B Coll	G12/17B	BS	IIIaJ-E	B	Focus 110R	+64°F	
40/21 *						"		B	100R	* more guiding attention	
40/21		Exp meter rate very sensitive to Focus - Good						B	85R		
40/23						"		B	75R	RA drift	
40/23						"		B	65R	+63°F	
400/ - 2	3" ??		* Fe over-	Arc done (wrong drum posn) stellar area		BS	IIaD-E	B	Focus 65R	hard to Focus may be bad seeing	
400/50 good now		6.8-7.66	F0-G1	"	"	"	"	A	65R → 62°F	Should have used a variable ! neon (looks faint)	wk v2 for all of
Focus good ↑		N S	Exp meter balance checked - it's OK & stable by 07h processor -								
40/20	2"	495	B7V	B Coll	G12/17B	BS	IIaD-E	A	Focus 55R	Temp +62°F	Fine
40/42		"	"	"	"	"	IIIaJ-E	B	"	" Exp meter balance unstable	sl wk
				"	"	"	IIIaJ-E	A	Focus 55R	Temp +61°F worse than #4	ok str
							IIIaJ- old	A	45R	61°F much weaker than #3	sl wk
							IIIaJ old	B	90R	61°F bad image	
							"	A	70R	61 good	
		??	I think	95R For			61°F Tq			over →	

56 cont

Date . June. 23-24. Observers ... T.S.

Emulsion Batches:

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Spectr. Temp

Focus .....

Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Sec
T5	libelled J24	Tests of	Slicer		3 min					Full, no m	
T6	Blue Slicer	centering	on grating		3 min					(South	
4268 T7	Red Slicer				3 min					(South	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Full, no mask				Blue Coll		BS	103aD				
(South masked)				"		BS	"	All	4-55s placed at NE corner of Target.		
(South masked)				"		RS	"			on G1 G17 grating	
42680→42817				dev June 24	5:5 min @ 68°F				Sumeas Test before Tonights ~~Extend~~ adjustments		

57 Tues Wed

Date June 27-28 1978 Observers ....Tu.....

Emulsion Batches:
..Da O-E...3003 8-...15068
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Plate No.	Object	R.A. 1900	Declination ~~1900~~	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
42682	HD 121370 n Boo	13 49.9	+18 54	21 05	21 07	01:19W		None	
42683	39 Ser	15 ~~48.6~~	+13 31	21 20	21 43	0 04E	+13 21	none	
42684	Vesta	16 32.9		21 57	22 17	0 08E	−16 52	none	
42685	HR 5996	16 1.5	−13 48	22 34	23 07	1 07W	−13 54	none	
42685T	Spot Calib plate for 42682−				15 min @ 15V	D4 3900	D3 4300	D2 4810	
42686	HD 153344	16 53.9	+62 16	23 15	00 17	1 28W	+62 12	none	
~~42687~~	Pallas? at beg;	16 54 30		00 32	01 26	2 38W	+25 17	none	
	drifting South	& slwest of	56 Her						

Spectr. Temp.
Focus....40
Spectr. Temp

Exp. Mtr.	Ser
1...2	F
two 7	2
40/106	2
None	2
Ver. Approx 40/2.2	2
Aug/80	

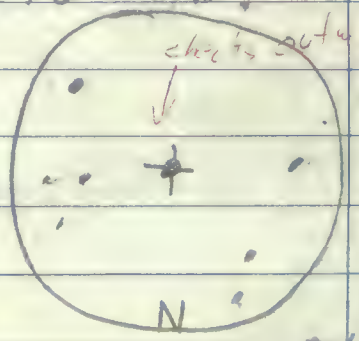
Spectr. Temp. +79°F Dome Temp./Hum. +75°F / 80% Transparency Conditions Photometric

Focus 40R

Spectr. Temp. +71°F Dome Temp./Hum. +63°F / 95% Cloud by 01:30

58

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
none?	1"-2"	3.27	G0 IV	B Coll	G12/17B	BS	IIaO-E	A	For tail/fg		Fine
none ?	2'	6.7	G2 V	"	"	"	"	B			sl wk
400/106	2-3'	~6.3?	G	"	"	"	"	A		moving cloud Exp did not be interrupted	wk
None	2"	7.0	G4-V	"	"	"	"	B			
							"				wk
very Approx 400/220	3"?	7.8	G5	B Coll	G2/17B	BS	"	A	Temp +75°F	Exp started from 2h 58 on 400/70	wk
400/80	"	9.4	G	"	"	"	"	B		PH mount tightened before this Exp. Fld drawn	not Dev
								←	↓	Fld For Pallas Yes	
			*	KK- Please do this exp with the reg'lr G grtg.							bl clouds
					this is real [illegible]						
			*	More IIaO needed in Vac							
				No IIIa J in Vac either, we may use some, no?							bl+
											Prob 57 Her



59 Thurs - Fri

Date Jun. 29-30 ..... Observers ... Tn - Blan - KK .....

Emulsion Batches:
Date .....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42687	Sky			20 35	20 47	0 0	0° 0	Fe Arc none	@ end 15 sec
42687F1	Focus Test			(Stellar - Comp)				Fe Arc none	15/15
F2				(Comp - Stellar)				"	15/15
X				21 02				"	12-0
	4x5	of Incad light dist on grating					3 min		
	Labels 15	Fe Arc exp tests					15 sec		
	" 30						30 sec		
	" 1						1 min		
	" 2						2 min		
	" 4						4 min		
F1	Hartman Focus Test			Comp - Stellar			1min - 2min - (1min	added	
F2				Comp - Stellar			(2min - 2min)		
F3				Comp - Stellar			(2min - 2min)		
F4				Comp - Stellar			(2min 2min)		
F5				Comp - Stellar			(2min - 2min)		

Spectr. Temp. +77°F ..... Dome Temp./Hum. ...../73 Transparency Conditions ... Clear .....

Focus ..... 40R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

60

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/86			G	B Coll	G12/17B	BS	IIaO-e	A	Rg Clear for		
				"	"	"	IIaO old	B	Set 40R Temp 77°F		blue
								B	60R " 77°F		"
Cancelled				—				A			"
							IIIaO-E		60R Temp +75°F		
							"				
							"		74°F		
							"				
							"				
(Ran out to Comp at end)							"	B	80R	Temp 73°F	
							"	B	70R	"	
							" new bake	B	60R	"	
							" "	B	50R	"	
							"	B	40R	"	

Cont

61

Date ... June 30 ... Observers ... Bln - Ty ...

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
T6	Rot. Screw 1 turn	CCW	(may not	have been	seated	properly		Fe Arc None	45^{-3}
T7	" "	2 turn CW						"	"
T8	" "	2 turn CCW	+ left there	(i.e. 1 turn	CCW from	orig. pos.		"	"
T9	Normal Rot.							"	45^{-3}
T10	1 turn CCW							"	45^{-3}
T11	2 turn CW		+ left there	(i.e. 1 turn	CW from	orig. pos.		"	45^{-3}
Test 30	F1 - F5 +	T6-11	No Good	- Revolver	in wrong	position		Scrap	
F1	Hartmann Focus Test			Comp. - Stellar			$2^m - 2^m$		
F2	" "	"		"	"		$2^m - 2^m$		
F3	" "	"		"	"		$2^m - 2^m$		
F4	" "	"		"	"		$2^m - 2^m$		
F5	" "	"		"	"		$2^m - 2^m$		
T6	Rot. Screw 1 turn	CCW						Fe Arc None	45^{-3}
T7	" "	2 turn CW						"	"
T8	" "	Normal						"	"
T9	" "	1 turn CCW						"	"

Spectr. Temp

Focus

Spectr. Temp

Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					12/0.7B	BS	IIa-O	A			
					"	BS	IIa-O	B			
					"	BS	IIa-O	B			
					"	RS	098	A			
					"	RS	098	B			
					"	RS	098	A			
Plates	and	Repeat	Image			slit			returned	to	
				B Coll.	G12/0.7B	BS	IIa-O	B	80R	T = 68°F	
				"	"	"	"	"	70R	"	
				"	"	"	"	"	60R		
				"	"	"	"	"	50R		
				"	"	"	"	"	40R		
				"	"	"	"	"	30R		
				"	"	"	"	"	"		
				"	5/6 R	RS	098	"	"		
				"	"	"	"	"	"		

63 – July 1

Date 30 June cont Observers In

Emulsion Batches:
Ilford E
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Spectr. Temp
Focus
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Se
T10	Rot Screw 2 turns CW							Fe Arc None	45 sec		
F11	Hartman Focus	Test (old Plate tilt but adj screws tightened)				Comp	Stellar		1.5 min 1.5 min		
F12	" "	" (R tilt bolt off		4 Flats)		Comp	Stellar		1.5-1.5		
F13	" "	"	"	"		Comp	Stellar		1.5-1.5		
F14	" "	(R tilt bolt off	another 4 Flats)			Comp	Stellar		1.5-1.5		
F15	" "	(R tilt bolt in	6 Flats			Comp	Stellar		2 min – 1.5		
F16	" "	(R tilt bolt in	1 Flat further)			Comp	Stellar		2-1.5		
F17	" "	"	"			Comp	Stellar		2-1.5		
T18	Comp Spect for Slicer tilt test (Not changed)								45 sec		
T19	"			1/8 CW Turn					45 sec		
T20	"			1/8 CW Turn	Further				45 sec		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B Coll.	G1 0.7B	RS	098-02	B	60R		
				"	G1 0.7B	BS	IIaO-E	B	30R	Temp +71°F	
				"	"	"	"	B	"		
				"	"	"	"	A	"		B
				"	"	"	"	B	"	Temp +71°F	
				"	"	"	"	B	"	Temp +69°F	
				"	"	"	"	B	"		
				"	"	"	"	B	40R	Temp +69°F	
								B	40R		
								B	"		
								B	"	Temp 68°F	

J
65 15hrs EST

Date July 1/25 Observers Jn

Emulsion Batches:
078-02

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
T21	Comp Spectra for Rad Slicer Roth test			(Screw CCW 3/4 turn)				Fe Arc None	2 min
T22	"			(Screw CW 1/4 from ↑)					2 min
T23	"			(Screw CW 1/4 more)					2 min
F24	Hartman Focus Test			(Comp - Stellar)					4-3 min
T25	Stellar Spectra for RS Roth test			Same Roth as T23 but PH Mount				1/2 Flat	7 min
T26	Stellar "	"	"	Screw CW 1/4	From 25			Fe Arc None	2 min
F27	Hartman Focus Test			(Comp - Stellar)				"	4-3 min
T28	Comp Spectra for RS Roth Test			Roth - Same as T26					2 min
T29	" "	"	"	Screw CCW 1/4	From 28			Fe Arc None	6 min
T30	Comp Spectra for RS Roth Test	(Same Roth as 29 but PH Mount in vs		from last set	(approx 1/4 Flat)			Fe Arc None	2 min
T31	"	"		Screw CW 1/4	From 30			"	2 min
T32	"	"		Screw CW 1/4	From 31			"	2 min
F33	Hartman Focus Test			(Comp - Stellar)				"	3-3 min
F33	" " "	"		(Comp - Stellar)				"	5-4 min

Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr.

Set 30R

From F16

Set 30R

Set 25R

Spectr. Temp. +67°F ..... Dome Temp./Hum. +69°F / 52% Transparency Conditions .....

Focus ..... 30R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Spec Cell	G168/178	RS	098-02	B		3 not laterally tilted due to wedge.	
				"	"	"	"	"			
				"	"	"	"	"			
Set 30R		Temp +68°F		"	"	"	"	"			
From F16 - F17				"	"	"	"	"		? Label 25 by accident	
				"	"	"	"	"		? " 25 by accident	
Set 30R		Temp 69 °F		"	"	"	"	"			
				"	"	"	"	"			
				"	"	"	IIaO	"	no 098 left - emulsion		
Set 25R		Temp 70.5°F.		"	"	"	098-02	B	Arc window cleaned after exp.		
				"	"	"	"	"			
				"	"	"	"	"			
Set 25R		Temp 70.5 °F		"	"	"	"	B	This Final setting puts screw 1/4 turn CCW From initial setup point.		cont vsl
"		" 70.5 °F		"	G128/178	BS	IIIaJ	B			
				Use T30-33 For Rel Sheer			Rate measures - other sets are zero.				

67

Date July 2 Observers T.H.

Emulsion Batches:

Spectr. Temp
Focus 3
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Min	See
34F	Hartman Focus test		→ (RH Plate Mount bolt in sl ≈ 1/8 turn)				13 46	Fe Arc none	2m		
35T	Comp Spect for BS Rotation test			- no change - well seated etc					45 sec		
36T	"	"	"	1/8 CW	ie	From T20			45 sec		
37T	"	"	"	< 1/8 CW	ie	From 36			4 sec		
38T	"	RS	"	no change other than locking					2 min		
							46 10				
July 4	Note Vsl CCW From 36 T posn should be right.										
	Focus For 69°F should be moved From 30R → 02R For same tilt of Mount.										

Spectr. Temp. ..69°F..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ....30R.....

Spectr. Temp. ..... Dome Temp./Hum. .....

68

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
(Comp-	Spect)			Blue Coll	G12/17B	BS	IIaO-old	B		center slR Tilt OK	
				"	"	"	IIaO-E	B			
				"	"	"	"	"			
				"	"	"	"	"			
				"	G16R1-7E	RS	098	"	stellar pos unfortunately		

Emulsion Batches: .....

Date July 4-5.178.. Observers ....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
39T	Comp Spectra	For BS	Rotn Test	no change From 38T				Fe Arc none	2.5m "
40T	" "	" BS	" "	vs/ CCW	From 36T	ie	Locked also	"	1 min
41F	Focus Test	For BS system		(comp - stellar)				"	1.5-1.5
42F	"			"				"	1.5 1.5sec
	July 6-7								
43F	Focus Test	BS, comparison fed at		f/6					60-60
44F	Comp Spectrum	BS full aperture							20

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ..From 30R -> 0.....

Spectr. Temp. ..... Dome Temp./Hum. .....

70

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Blue Cdl	G16R/.7B	RS	098 old	B			
c				"	G12B/.7B	BS	IIaO-E	B			
				"	"	BS	"	B	Oset /468°F		
				"	"	"	"	B	O→85R @ +68.5°F		
					G12B/.7B	BS	IIaO-E	B	85R +75°F		
					"	"	"	"	"	"	

71

Date 1978 July 9/10 Observers KK

Emulsion Batches:
IIaoe 30038-07078

Spectr. Temp
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Sec
T45F	focus test							arc	15-15		
42688	HD ~~161051~~ 161096	17 38.5	+4° 37'	~~22~~:20	22:29	0 18 E		arc	30-30	40/100	3
42689	AD 161096	"	"	22:38	23:01	0 13 W		arc	30-30	40/250	3
42690	"	"	"	23:05	23:09	0 21 W		arc	30-30	40/40	4
42691	"	"	"	23:19	23:29	0 41 W		arc	30-30	40/100	4
42691F	focus test							arc	15-15		
	July 11										
42691F2	focus test							Ne	30-30		
T1	full aperture							Ne	60-60		
~~T2~~	"							"	"		
	July 12/13										
T3								arc	15		
T4								"	"		
T5								"	"		
F3								"	"		

Spectr. Temp. 76°F Dome Temp./Hum. ..... Transparency Conditions clear w/ patches

Focus 85R

Spectr. Temp. 75°F Dome Temp./Hum. .....

72

Comparison Type	Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							B.C.	G12/.7	BS	IIaOe	B		v sl to red but dog-legged	
arc		30-30	40/100	3±	3.93	K2 II	G12 B	G12/.7	BS	IIaOe	A	Std Vel.	β Oph. focus appears to sl/str	
arc		30-30	40/250	3→4	"	"	"	"	"	"	B	"	very along slit str	
arc		30-30	40/40	4	"	"	"	"	"	"	A	"	i.e. one comparison s/wk	
arc		30-30	40/100	4	"	"	"	"	200μ	"	A	"	in focus, other out str	
arc		15-15					"	"	200μ	"	B		best BS exposure ~40/70	
Ne		30-30					B.C.	G16/.7	R.S.	098-02e	B	60° 85R	very uneven comp lines	
Ne		60-60					"	"	"	"	A			
"		"					"	"	250μ no lens	"	B		comparison v wk on one side	
							focus appears to change along slit on R.S. also							
arc		15							RS			F = 85R		
"		"							RS			50R		
"		"							RS			120R		
"		"							200μ			85R		

73

Date 1978 July 17/18 Observers KIC - Ri

Emulsion Batches:
IIaJ c. 31058 - 10078

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Spectr. Temp. / Focus / Spectr. Temp.
42691F4	focus test							Fe-Ne	120 sec		
42692	HD 161096	17 38.5	+4 37	22.10	22:28	00h11m W	+04°-34	arc	15-15-15	40/300	2.7
42693T1	focus test							arc	15		
42693	HD 174638	18 46.4	+33 15	22:37	22:53	00h30m E	+33°18	arc	15-15-15	40/300	
42693T1	focus test							~~Fe-Ne~~ arc	15-15		
					5m DIG 69						

Spectr. Temp. 70°F Dome Temp./Hum. ..... Transparency Conditions . clear .....

Focus 85R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

74

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	G12/.7	BS	IIIaF	B			contin 31 on red exp ok comp str.
40/300	2"-3"	3.7	K2III	BC	G12/.7	BS	IIIaJ-e	B	Std Vel	βOph	
				B.C.	G12/.7	BS	IIIaF	B			
40/200		3.9V	Bpe	B.C.	G12/.7	BS	IIIaJe	A	Exp test	βLyr	str comp str. very under comp exp.
				B.C.	G-K/.7	R.S.	098-02E	B			

focus changes along spectrum on 42693 (plate holder A out?), same as on 42690, also A will have to limit use to B Temporarily

exp on BS should be (IIIaJ) 40/300 red * 40/150 blue *

arc 5-5-5

Fe Ne 10-10-10 (or less?)

IIaO about 40/70 red * 40/40 blue *

75

Date 1978 July 15/16 Observers h.k. -R.

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
4269372	focus test		comparison stella	/	stella comparison			Ne-Fe	30-30		
4265313	"		comparison - comparison	/	stellar stella			"	30-30		
	July 20/21										
42693T4	focus test Temp. = 82°F							NeFe	10-10		
T5	"	"						Ne	30-30		
T6	comparison							NeFe	5		
T7	"							Ne	60		
			Neon lamp directly above RS. with diffuser								
			NeFe thorium comparison feed at ~ f/4. brightest grating illumination w/ beam							hitting collimator	

Spectr. Temp. ...76°..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

76

Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					temp 76	Focus 85R				B			
					"	Focus 60R				B		slightly to red	
He Fe	10-10				set 100R		G12	BS	IIaJ	B		should be 45R	
Ne	30-30				"		G16	RS	098	B		should be 55R	
He Fe	5				set 45R		G12	BS	IIaJ	B			still poor
Ne	60				set 55R		G16	RS	IIaF	B			fairly good
mation w/ bra		hitting culmination TO WEST											

77

Emulsion Batches: .....

Date 21 July 1978 Observers KK - Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42693T8	comparison test Ne + diffuser							Ne	
T9	focus test							Fe Ne	5-5
T10	comparison							"	5
T11	comparison arc + diffuser							arc	60
T12	blue slicer — NO DECKER							Fe Ne	5
T13	blue slicer - NO DECKER - diffuse illumination from "dirty" Ne lamps (Ar contaminated)								15 min
T14	focus							Fe Ne	5-5
T15	comparison							Fe Ne	5
T16	comparison							arc	15
T17	"							arc	12
T18	focus							Fe Ne	5-5

Spectr. Temp

Focus .....

Spectr. Temp

Exp. Mtr | Sc

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Type	Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ne							BC	G8/1.+	BS	IIa0	B			blank
Fe Ne		5·5					"	"	"	"	"	T=76°F focus set 45R		
"		5					"	"	"	"	"	"		
arc		60					"	"	"	"	"	set 60R		
Fe Ne		5					"	"	"	"	"	"		
		15 min					"	"	"	"	"	"	lines good except at blue side (duplog's)	
Fe Ne		5·5					BC	G16/.7	RS	IIaF	"	T=77°F set 60R		
Fe Ne		5					"	"	"	"	"			
arc		15					"	"	"	"	"			
arc		12					"	G8/1.+	BS	IIa0	"			
Fe Ne		5·5					"	G16/.7	120μ	IIaF	"	"	" should be 38R.	

79

Date July 22/23. 1978. Observers KK-Ri

Emulsion Batches: IIaJ 31058 - 10078

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42693 T19	slit illumination							FeNe	5
T20	focus test							"	5-5
T21	slit illumination							"	2
T22	slit illumination							Fe	5
T23	spot plate	15 min	43 00 15 00						
T24	comparison test on blue sliver w/ prism set at current slit feed position							Fe	10

Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr

Spectr. Temp. 80°F ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ..... 35R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

80

Comparison Type	Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe	Ne	5					BC	G12/.7	120μ	IIaJe	A			
"		5-5					"	"	"	"	B		< lens shifted slightly (8 mil) in comp. field	
"		2					"	"	"	"	B	80°F	read Focus 25R	
Fe		5					"	"	"	"	B			
										"				
Fe		1					"	"	BS	IIaOe	B			wk

81

Date 1978 July 23/24 Observers KK-Ri

Emulsion Batches:
IIaO e 30038 - 30068

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
42693T25	focus test							Fe	5-5	
42694	HD 186791	19 41.5	+10° 22'	22 57	23.41	00h10E	+10°31	Fe	2-2-2	80/137
42694T1	SPOT CALIBRATION	15m@15v	D4 3900 D3 4300 D2 4810							
42695	HD 186791	19 41.5	+10 22	23 46	23:57	00h01W	"	Fe	10-10-10	80/150
42695T1	focus test							Fe	15-15	
42696	HD 186791	19 41.5	+10 22	0007	00:24	00h28W	"	Fe	2-2-2	80/140

Spectr. Temp. ..75°..... Dome Temp./Hum. 20°C./76% Transparency Conditions ...Streaks.....

Focus ....30R.....

Spectr. Temp. ..... Dome Temp./Hum. .....

82

Comparison Type	Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Fe		5-5						G12/.7	120μ		B		75° set 25R	
Fe		2-2-2	80/137	6+	4.15	K3II	B.C.	G12/.68	"	IIa0e	A	STD VEL.	reset 30R; thick cloud at end	
										IIa0e				
Fe		10-10-10	80/150	"	4.15	K3II	BC	"	BS	IIa0e	B	STD VEL	clear again	
Fe		15-15					BC	G12/.68	BS	IIa0-E	B		shunted to dim* 65F	ok
Fe		2-2-2	80/140		4.15	K3II	BC	"	120μ	IIa0-e	A	STD VEL		
						5m	DIG	65° F	.13	1.37				

83

Date . July 24. 25. 28. Observers . Fe : Ri .....

Emulsion Batches:
0,1X-02E 30538-21078
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
4269691	focus test							Fe	15 sec		
42697	HD 161096	17h 38.5	+4° 37	22:07	22:22	00h 31 W	+04 34	Fe	5-5-5		
42698	HD 166181	18h 4.4	+29° 39	22 35	00 27	02h 12 W	+29 39	Fe	5-3-5		
4269811	spectral test plate	42698			15 min	1 sec D3 4810	1 sec D1 Hα	1 sec D2 5450			
42699	HD 200391	20h 58.1	+27° 24.8	00 52	02. 39	01h 30 W	+27° 41	Fe	3-3-3		
42700	HD 186791	19h 41.5	+10° 23'	02. 48	02:56	03h 03 W	+10° 33	Fe	3-3-3		
42701	HD 222368	23 34.8	+05° 05'	03:05	03.23	00h 23 E	+05 29	Fe	3-3-3		
42702	"	"	"	03. 26	03:45	00h 01 E	"	"	3-3-3		
42703	"	"	"	03:48	04:10	00h 13 W		"	3-3-3		
42703T1	focus test			9 66°F	F 30 R				15-15		
42703T2	full aperture								10-10		
T3	focus test							arc	55		
T4	full aperture comp + stellar		slit rotation & curvature test					"	"		
T5	"	"		"	"		screw 1 turn out				

Spectr. Temp. ...75°F..... Dome Temp./Hum. ..... Transparency Conditions ..Clear.....

Focus .....30R.....

Spectr. Temp. .....60°F..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	G16/.7	120μ	098 02 E	B			V. P
+0/30		3.93	K0 III	B.C.	"	2μ	"	A	Std Vel	B Oph	
800/400		V=7.6	G5	B,C.	G16/.7	120μ	"	B	RS Cl n/Fgi		
							098 02 E				
800/400		7.72	G0	B.C	G16/.7	120μ	"	A	RS Cl n/Fgi		
+0/40		4.15	K3 III	B.C.	G16/7	"	"	B	Std Vel		
+0/40		4.64	F7 II	"	"	"	"	A	"		
10/30		"	"	"	"	"	"	B	"	"	
+0/30		"	"	"	"	"	"	A	"	"	
							"	B	"		
								A			
				BC	G8/1.4	120μ	098 02 E	B	70° 30R		
				"	"	"	"	"	"		
				"	"	"	"	"	"		

85

Date 27/28 July 1976 Observers Ri

Emulsion Batches:
IIaO 30038
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Spectr. Temp.
Focus 7
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
42703T6	focus test			01:14				Fe/4x	5-5		
42704	HD 186791	19h 41.5	+10° 22'	01:14	01:24	01h43W	+10° 33	Fe/4x	55-5	40/30	
42705	HD 186688 (SUCyg)	19h 40.8	+25° 01	01.30	02:00	02°18W		Fe/4x	5-40	40/60	
42705T1	step cal	20m									
42											

Spectr. Temp. 73° ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ..... 70.R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

86

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68	BS	IIaO	B			v.v.blue
40/70		4.15	K3II	BC	"	BS	IIaO-E	A		comp lines good	v.v.blue
400/60		6.8 7.66	F0 G1	BC	"	"	"	B		doubled in	v.v.b
		comparison lines become broad & uneven on blue end							C of spectrum on longer (west) side		
		6m D19 66°F									

87

Sun Mon

Date July 30/31 1978 Observers R.-KK

Emulsion Batches: IIaF 30038-27078

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Sec
4270572	focus test							Fe	5/5		
4270573	focus test							Fe/x4	5/5		
42706	HD 186 791	19h 41.5	+10° 22'	00: 20	00: 45	01h 15W	+10° 35'	Fe	2-22	40/100	
42707	"	"	"	00: 48	01: 06	01h 37W		Fe x4	2-55	40/100	
42708				01: 08	01: 20	01h 52W		Fe/x4	5-5-5	40/100	
42709				01: 25	01: 37	02h 09W		Fe/x4	5-5-5	40/100	
42710	"	"	"	01: 42	01: 55	02h 26W		Fe/x4	5-55	40/80	
42711	(SU Cyg.) HD 186688	19h 48.8	+ 29° 01	02: 00	04: 12	04h 45W	+29° 15	Fe/x4	5-55	40/320	
42711T1	spectral		13mm @ 55 Volts		D4 3900 D3 4300 D2 4810						
42711T2	focus test							Fe/x4	55		

Spectr. Temp

Focus

Spectr. Temp

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . scattered clouds then clear

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 64°F 87%

88

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	G12 1.68	120μ	IIaO-E	B		66°F 2BR	
				"	"	BS	"	B		66°F 6OR blue	
40/100	5	4.15	K3II	B.C.	G12/.68	120μ	IIaO-E	A		slit lengthened to form 3SR	
40/100	5	"	"	"	"	150μ	"	B		#8 BROKEN	
40/100	5					200μ	"	A		#7 "	
40/100	5					250μ		B			
40/80				B.C	"	B.S.		A		form 7OR	
40/330		6.8 7.66	FO G1	BC	"	B.S.		B		DAWN	exp. fine
				BC	G12/.68	BS.	IIaO-E	B	60°F	7OR	vs/16mm
			8m	D19 66°F	.19	1.74					

89 Thurs Fri

Date Aug 3-4 1928 Observers T.-Ri

Emulsion Batches: Eastman 40 Type 0785

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4271:T3	comparison test							Fe NC ND x 4	5 sec
4271:T4	"							Fe ND x 4	15 sec
4271:F1	focus test								
4271:F2	focus test							Fe	5·5
4271:T5	comparison test							Fe + N.D.	15 sec
4271:T6	"							Fe Ne old lens	5 sec
T7	"						+ Diffusor	Ne neutrals	120
T8	"							Ne	15 sec
T9	"							Ne	30 sec
T10	"							Fe	~10 sec
F3	focus test Aug 4							Fe	15-15
F4	focus test							Fe	15 15
T11	comparison							Fe	15

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C	G13/68	BS	IIaO-E	A		Fair ~ left side	exp ok focus poor
				B.C	"	BS	IIaO-E	3			exp good
				B.C	"	BS	IIaO-E	B		690F 73R	blue ond sl. blue red ond on
				B.C	"	120μ	IIaO-E	B	moto. 120μ slit (Hg) before exp. was loose & tightened	690F 33R	blue ond v. blue red ond on
				B.C	"	120μ	"	A			exp sl. str focus poor
				"	"	"	"	A			V. strong
				"	"	"	"	B			very uneven sl. weak
				"	G16/17	120μ	098-01E	A		098 ~ right side	fairly even
				B.C.	"	R.S.	"	B		Focus 690 - 73R	good
				"	"	"	"	A			v sl str
				"	"	"	"	B			good
											ok
				R.C	G12/68	BS	IIaJ-C	B		68° 70R (cent sl Red) (Blue Blue)	center ok
				RC	"	"	"	"		"	

91

Date Aug. 4-5, 78 Observers T.n

Emulsion Batches:
IIa-E
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Focus / Spectr. Temp. / Exp. Mtr
42711 F5	PH Roth's Focus Tests	½" use for BS Roth measured too						Fe	15-25	
F6								Fe	15-15	
F7								Fe	15-15	
F8								Fe	15-15	
F9	PH Rotated	1 Flat in of RH bolt						"		
F10										
F11								"	"	
Aug 6-7 F12	Focus Test	Plate seated loosely						Fe/4x ND	7-5	
42712	61 Cyg A HD 201091	21 21.4	+38 15	00 43	01 33	01 11W	+38 39	"	5-5-5	
42713	HD 222368	23 34.8	+5 05	01 38	02 05	E	+05 32	"	5-5-5	
42713T	Spot Calc for	42712-17			15min@15V	D4 3900	D3 4300	D2 4800		
42714	HD 222368	23 34.8	+5 05	02 16	02 38	00 17E		Fe/4x ND	5-5-5	
42715	"	"	"	02 41	02 56	00 01W		"	5-5-5	
42715F								Fe none	5/5	
42716	HD 222368	23 34.8	+5 05	03 04	03 23	00 28W		Fe/4x ND	5-5-5	
42717	"	"	"	03 30	04 01	01 06 W	+5 32	"	5-5-5	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

92

KK put shim under West Side of G12

Comparison Type Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					R. C.	G12/68B	BS	IIIa J-e	A	69°F set	65R	
					"	"	BS	"	B	"	" 105 sec	
					"	"	120M	"	A	68 °F set	35R Refl mixed ½ CW & clamped	blue cast slibine
					"	"	120M	"	B	" "	ied cast slred blue ok	
					"	"	"	"	A	"	cast slBlue slmore Blue in 2	
					"	"	"	"	B	"	"	Ok
					"	"	BS	"	B	67°5 set	65R ; cast slred blue ok	
7	probable				RC	G12/68B	BS	IIIa0-e	B	72.5°F Set	46R Blank?	
5	400/317		6.4	K5 V	"	"	"	"	A	"		
	400/60		4.64	F7 V	"	"	"	"	B		thin cloud	
								"				
	400/87	2"?	4.64	F7V	RC	G12/68B	150M	"	A		Cant see slit on TV (bent) Stop set thump	
	400/52		"	"	"	"	120M	"	B			
					"	"	120M	"	B	Temp 70°?	Set 46R	
	400/55		4.64	F7 V	"	"	200M	A	A		Closed	
	400/60?		"	"	"	"	150M	"	B	Fe Fixed to its own cal Set to Equator	Poor Cals	

93

Date Aug. 7-8/78 Observers Tin

Emulsion Batches:
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Spectr. Temp
Focus.....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
42717 F1								Fe/none	4-4	
F2								"	4-4	
F3								"	4-4	
F4								"	4-4	
T1	Rotn Test after a .73 Turn ccw adj							"	4	
F5	Focus Test after RC moved & reclamped							"	4-4	
42717 T2	Much later							Fe/none	4	
F5								"	4-4	
F6								"	4-4	
F7	A Little Slit Rotn & Length change							"	4-4	
F8	"	"	"	"				"	4-4	
F9								"	24-24	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/168	BS	IIaO-E	B		71.5°F Set 5R	cont sl red
				"	"	120μ		B		"	
				"	"	120μ		B		72°F Set 5R	cont v sl red
				"	"	120μ	"	B		73°F Set 25R	cont v sl red
				"	"	250μ		A		72°F Set 25R	F ?
				"	"	120μ	"	B		72+? Set 5R	OF
				"	"	BS	"	B		71°F Set 3R	v. small leakage of extraneous red
				"	"	"	"	A		71°F " —	cont sl blue more so in blue
				"	"	"	"	A		71°F Set 85R	cont Blue more in Blue
				"	"	150μ	"	B		Set 16R	cont sl red
				"	"	250μ	"	A		71°F "	
				"	"	RS	"	B		71°F Set 16R	cont blue in Blue lighter in red
										Interrupted exposure	
			6" Dg 66°F								

Comparison Type/Filter Exp.

95

Emulsion Batches: .....

Date Aug 8-9 1918 Observers J.S. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42717 F10	Hartmann Focus Test (Note		[Comp Feed F ... 11 Step	Field lens p... hole Facing	in North dock) West	Field lens in South loc...	...	FC/None	15-15
F11						Tests (...	...		15-15
T3	Flexure Test	[Comp 01 20W]		[Stellar 04 33 W]			+31 20		10-10
T4		[Comp 04 33 W]		[Stellar 04 30 E]			"		10-10
T5		[Comp 04 30 E]		[Stellar 0 30 E]			"		10-15
X X	Note - Found that PA Mount was still not tightly bolted to optical plate.								
T6	Flex test	[Comp 5h 0E]		[Stellar 01h W]			+31 20		10-10
F12	Focus Test							FC None	15-15
F13	"							"	15-15
F14	"	Comp Field lens moved to 5 lock - 4th step hole down						"	15-15

Spectr. Temp. 74.5°F ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	512/589	120μ	IIa-J	B	set 16R Temp 74°F		poor red
								B	Set-34R 74°F	e shown in red	
+60μ								A	Set 10R	cent red	
−47μ								A		cent blue	
−40μ								B		cent blue	
in the quiet I could hear a "tap tap tap" when pulling & pushing E & W — goods tight now (— new Focus is Rotn maybe)											unlikely
−82μ				RC	512/589	120μ	IIa-J	A	PH	cent blue	
				"		"	"	B	Set 10R Temp 74.5°F		
				"		"	"	B	Set −20R 74.5°F		no red
				"		ES	"	B	"	"	ok red if centre blue no blue

#1 97

Date Aug. 9-10, 178 Observers J.H.-K.K.

Emulsion Batches:
IIa-J-e
IIa-F-e

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42717F15	Hartmann Focus Test								
T7	Flexure test	Stellar	0h, +46° (2nd)	← Comp (1st)	0h, −10°			Fe	15-10
T8	" "	Comp	0h, +46°	Stellar	4hW, +46°			Fe Ne	4, 4
T9	" "	comp	4hE, +46°	Stellar	0, +46			Fe Ne	4, 4
F16	Focus Test							"	4
42718	HD 186791	19 41.5	+10 22	22:27	23:05	00 15W	+10 35	Fe Ne diffuser	60-60-60
18T	Spot Calibration	D4 17.5 v.		3900; D4 15V 4300;		For 42718-19,22			
42719	HD 186791	19 41.5	+10 22	23:10	23 36	0047W		Fe / Ne	5-5-5
F17	Focus Test							"	25-25
42720	HD 186791	19 41.5	+10 22	0 00	00 14	01 25W		Fe Ne	5-5-5
42721	"	"	"	00 22	00 50	02 00W		"	"
42721T	Flexure Test	[Comp −10°]		[Stellar +40°]				Ne	15-15
42722	λ And HD222107	23 32.7	+45 55	01 27	02 37	0 04E	+46 18	Fe / Ne	7-6-7
42723	HD 3712	00 34.8	+55 59	02 42	02 59	0 44E	+56 26	"	9-7-9
42723T	Flex Test	[Comp 0 30E] →		[Stellar 04hE]			"	"	12 (10-5)
42724	HD 24760	03 51.1	+39 43	03 16	03 30	03 30E	+39 55	"	11-10

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Comp Field of Lens moved			RC	G2/-45	BS	IIa-J	B	Set -20R	Temp +73.5°F	1 feature vs/blue
	+47	+41		"	"	12m	IIaJ	B			
	+4			"	"	"	IIaJ	B			
	-12			"	"	"	IIaJ	A			
				"	"	"	IIaJ-e*	B	Set -20R	Temp +71°F	
40/202	4"	4.24	K3 II	"	"	120μ	"	A	Set +15R	10³ comp on stellar decker by error exposure test	fair comp wk
							IIaJe				
40/252	"	"	"	RC	G2/6B	BS	"	B	"	½ meta fine ... e end	
				"	"	"	"	B	set 15R	Temp +69°F	Center Of Fila cent sl blue bk
40/250	"	V= 2.72	"	RC	G16/7B	RS	IIaFe	B	Broken 2pc	Yellow filter in Cap make	
40/207	"	"	"	"	"	120μ	"	A	also broken		str.
						"	"	B	-20	cent blue Hex in y also	
40/275	3"	4.0	K0	RC	G8/-32	BS	IIaJ-e	A	Set 50R	Temp 66.5°F	sl wk
40/302		3.34	K0 II	"	"	"	"	B	std Vel	65°F	sl wk
				"	"	"	IIaJe	A		+1 no Flex	
40/150		2.6	Bus V	"	"	"	IIaJe	E			sl wk

#2 99
11

Date Aug 18 cont'd 28 Observers T.

Emulsion Batches:
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Spectr. Temp.
Focus .....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	See
42724F	Focus Test							Fe/Mine	Approx 20-20		
42725	HD 21760	03 51	+39 43	03 47	03 58	03 02 E		"	10-5-10	46	
42725T	Terre	[Comp 03 7 E]	[Stellar 00]				40°	"	20-20		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

100

Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						G8	G8/-.x6	BS	IIaF	B		Set 50R Temp 35°F central red sl wk	
		40/116		2.6	Box V	"	"	"	IIIaF	A		Set 35R 63°F better Focus from 50R setting	
									IIaF	B		−10μ	
												set at 35 central blue	

101 Tow by Sho - 10 people

Emulsion Batches: 4-shot trun
098-02-e -10088

Date Aug 10-11 1978 Observers Tu-KK

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4-2725T2	Flex Test	[Comp 0h]			[Stellar	03 30W]	+19°	Fe/none	15-15
4-2726	HD 124897	14 11.1	+19 42	20 46	20 50	03 34W		Fe/none	7-7
26T1	Flex test	[Comp 0h +30°]			[Stellar	04 30W]		"	16 15
A2727	HD 124897	14 11.1	+19 42	21 46	21 53	04 37W		"	7-10
27F	Focus Test								15-15
27T1	Flex Test		[Comp 0h 30W] →		[Stellar	04 00E]	0° 0°	"	14-14
27T2	"		[Comp 4h 0 E] →		[Stellar	0 0]	0° 0°	4	14-14
27T3	Flex Test (no Te transmission)		[Comp (RC pulled down)]		[Stellar RC pushed up]		0° 0°	"	30-20
4-2728	HD 201092	21 02.9	+38 15	00 20	00 50	0 42W		none	10-10-20

Spectr. Temp.
Focus
Spectr. Temp
Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 102

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

*Shim of KK removed on 65 [illegible] removed

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	* G65/.5RB	BS	IIaF	A		+18 [illegible] cents / Red	
20/180	1"	1.2a	KO	RC	55/.5EB	BS	IIIaJ	B	std vel	four poor or flexure ~~stop~~ Fine	
				"	"	120μ	"	A		+24μ cent red sup? (Fe Sim) ! ok slit flex?	
20/180	2"	1.2a	KO	RC	G12/.5RB	120μ	IIIaJ	B	std vel	all emp lines obs. 69.5°F sat 25R	
				"	"	"	"	B	+11 Mike	69.5°F sat 25R cent sl red	
				"	"	"	"	A		+116μ cent red ~~down~~ ~~to~~ ~~slit~~	
				"	"	"	"	A		−13μ cent sl blue	
I noticed a tapping noise as I pulled RC [illegible]					"	"	IIaF	A		−3μ no F	
100/242	2"	V=60	K7V	RC	G65/.5B	RS	098-4E		Std Vel	(V Filter about RS)	strong

Fri Sat

103

Date Aug. 11-12, 78 Observers T.m

Emulsion Batches:
H+D 3038 -1.0088
098-07L -1.0088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42728F	Hartmann Focus	Test				0h	+4 40	Fe/Mine	10-20
42729	HD 161096	17 38.5	+4 37	21 06	21 38	0 58W	+4.39	Fe/	7-7
42730	"	"	"	21 46	22 20	1 41W	"	"	8-10
42730F	Focus Test					1 50W	"	Fe/Mine	20-20
42730T1	Spot Calib								
42730T2	Flex Test		[Comp 4"W → Stellar 0h]				+4 39	Fe/Mine	20-20
42730T3	"		[Comp 0h → Stellar 4"W]				"	"	20-20
42731	HD 186791	19 41.5	+10 22	23 03	23 29	0 42W	+10 38	Fe/	7-7
42732	"	"	"	23 32	23 45	1 03W	"	"	7-8
32F1	Flex Test		(Comp 0 30W) → (Stellar 0h 4E)				"	Fe/Mine	6-6
32F2	"		(Comp 4E) → Stellar 0h)				"	"	6-6
32F1	Focus Test						"	Fe/Mine	15-15
32F2	"						"	"	15-15

Spectr. Temp. 71.5°F ..... Dome Temp./Hum. 170°F / 73% Transparency Conditions ... sl. Hazy .....

Focus ... 0 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 182°*

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Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						RC	612/1688	BS	IIIaJ	B		Temp 71.5° set 0	
	7-1	40/85	1"	3.93	K2III	"	"	"	IIaD-e	A	std Vel	" stop #2	Flex Std Exp
	7-1	40/70	2"	"	"	"	"	120M	"	A	"	stop #3	Std
						"	"	120M	IIIaJ	B		Temp 71° set 0	
		KS Exp 39c 30 Too slow?				Removed to after testing	count of diff Exposure steps		IIaD-e				
						RC	612/1688	120M	IIIaJ	A	slow motor	driven shutter	
						"	"	"	IIaOe	A	" "	"	
	7-1	40/67	1-2"	4.15	K3 II	"	"	"	IIaD-e	B	Std Vel		
	7-	40/120	1"	"	"	"	"	BS	"	B	"	Temp 70.5°F stop 2	
						"	"	"	"	A			
						"	"	"	"	B	"		
		Mr Nov - Fire					616/7B	KS	O-E	B	set 0	Temp 70°F	
		"				"	"	120M	"	B	"	"	
		RC mirror, especially				noted	Just be						
		Smaller str ok											

105

Date Aug. 13/38 Observers T.A.

Emulsion Batches:
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Spectr. Temp.
Focus .....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
42732B	Position Index Test							Fe/	17-17		
32F4	"	"						"	17-17		
42733T1	Flex Test			0h (Comp +10)	0h		43°51	"	17-17		
33T2	Flex Tests, N S Plane		(Comp +43°)		(Stellar −10°)			"	10-7		
33T3	"		(Comp −10)		(Stellar +43°)			"	10-10		
33T4	"		(Comp +43°)		(Stellar +81 [illegible])			"	10-10		
33T5	"		(Comp +81)		(Stellar +43°)			"	10-10		
33T6	Flex Tests, E W Plane		Comp (0h +43°)		(4hW +25°)			"	10-10		
33T7			Comp (4hW +25°)		(0h +43°)			"	10-10		
33T8			Comp (0h +43°)		(4hE +25°)			"	10-10		
33T9			Comp (4hE +25°)		(0h +43°)			"	10-10		
33T10	Flex Test-Telescope at Zenith			but	(Top of Coil for S-Comp) (Top of Coil for W-Stellar) *			"	15-15		
						*	Coil can be	"	"		

Spectr. Temp. 78°F..... Dome Temp./Hum. 77°F..... Transparency Conditions 106

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G16/.7B	RS	098o2E	B	Temp 78°F set OR		OK
				"	"	"	"	B	"	Set-60R.	cent usl blue
				"				A		no Fle- as thought	cent extr
				"	"	"	"	B			cent extr
				"	"	"	"	B			cent est blue
								A			cent usl blue
				"	"	"	"	A			cent
								A			cent
								B			
								A			cent
								B	Temp 77°F		cent
(call Roth Test)				RC	G16/.7B	"	098o2E	A	RC was removed & put back in		cent v extr

107

Date Aug 14 1952 Observers J. Mattik

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
427 33T1	Flex Test for RC		(Comp 04h E)		(Stellar 0h)		+435)	Fe/none	8-8
33T2	" "	"	(Comp 0h)		(Stellar 4h W)		"	"	8-8
33T3	Flex Test for BC		(Comp 4h W)		(Stellar 0h)		"	"	8-8
33T4	"		(Comp 0h)		(Stellar 4h E)		"	"	8-8
33T5	"		(Comp 4h E)		(Stellar 0h)		"	"	8-8
33T6	"		(Comp 4h E)		(Stellar −10°)	@ 0h		"	8-8
33T7	More Flex Tests for BC		(Comp −10°)		(Stellar +44°)	@ 0h		"	8-8
33T8	"		(Comp 0h)		(Stellar 4h W)		+44°	"	8-8
33T9	Flex Tests for RC		(Comp 4h W)		(Stellar 0h)		"	"	8-8
33T10	"		(Comp 0h)		(Stellar 4h E)		"	"	8-8
21	"		(Comp 4h E)		(Stellar 0h)		"	"	8-8
22	"		(Comp 44°)		(Stellar −10°)	@ 0h HA		"	8-8
23	"		(Comp −10°)		(Stellar +44°)	@ 0h HA		"	8-8

Spectr. Temp.
Focus
Spectr. Temp

Spectr. Temp. 80°F Dome Temp./Hum. 20°/80% Transparency Conditions

Focus −5.0k

Spectr. Temp. Dome Temp./Hum.

note between exp T12 = T13 KK = Jan and removed blue contrast [illegible] moved Opt 1 plate to set [illegible]

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40m Blue	−y	sl overlap		RC	616/178	12μm	076 out	A		no Label much blue much −y	Flex
–				RC	〃	〃	〃	B			Blurry
7m Blue	−y	gap here		RC	〃	〃	〃	A		−y	Flex
12m Red	−y	(gap almost gone)		〃	〃	〃	〃	B		sl red cast −y	Flex
6m blue	no y	[illegible]		〃	58/−28	〃	Just p	B		v sl blue	Flex
21m Red	no y	or v sl −y		〃	〃	〃	〃	A		some	[illegible]
27m Blue	−y	(gap almost gone)		〃	〃	〃	〃	A		cent sl blue sl −y	
9m Red	+y	still v gap		〃	〃	〃	〃	B	RA by hand	cent v sl red v sl +y	
71m blue	−y	sl overlap Comp		(RC)	〃	〃	〃	A		cent blue sl V −y	
35m Red	−y	sl gone		〃	〃	〃	〃	B	RA by motor	cent sl red s −y	
30m Blue	−y	overlap Comp		〃	〃	〃	〃	B	*Extra plate used in PH	Jiggly cent sl blue s −y	
235 Red	+y	gap gone		〃	〃	〃	–	A	[illegible]	cent Ext Red s +y	
178m Blue	−y	overlap Comp		〃	〃	〃	〃	B	Temp 80°F	cent ext Blue s −y	

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Date 17/18 Aug 1978 Observers KK-Ri

Emulsion Batches:
IIaOe
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42733F1	focus test							Ar/—	100-100
F2	focus test							Fe/—	4-4
42734	HD 186791	19 41.5	+10°22'	0:12	00.30	2° nW	+10°34	Fe/2X	5-5-5
42735	HD 217782	22 58.0	+42° 13'	0:35	01:52	80°17W	+42°39	Fe/4x	5-5-5
42737	sp.9 cal			15m @ 15 Volts		D4 390	D3 4750	D2 4810	
42736	HD 222368	23h 34.8	+05°05	21 59	02:47	02°36W	+05° 31	F/4x	5-5
42738	fan TCI							F/—	5-5

Spectr. Temp. 69° ..... Dome Temp./Hum. ..... Transparency Conditions 110

Focus ... 30R .....

Spectr. Temp. ... 66 ..... Dome Temp./Hum. ... 15°C ... 10% RC secondary mounted again

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/.68	BS	IIaOe	B		Set 0, Temp 69	
				RC	"	"	"	"		Set 0	
40/100		4.15	K3 II	RC	"	"	"	"	Std Val	Reset 30R	
200/250		5.17	A2n	"	"	"	"	A	Std Val		
							"				
2m/300		4.64	F7V	RC	G12/.68	BS	"	B	Std Val		
				"	"	BS	"	B		should be 16R X 13R Temp 66°F	good
										Dew shutter on?	
				8m DIG 68°F			"	"			

Date 1978 Aug 18/19 Observers AH-R

Emulsion Batches: IIaD 30038 - 18088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42736FZ	focus test							Fe/—	5-5
42737	HD 124 897	14h 11.3	+19° 42	20:10	20:17	03m 33s W	+19° 12	Fe/—	5-5
42738	HD 131511	14 48.9	+19 33	20:22	22:01	04 39 W	+19° 14	Fe/ND4	5-5-5
42735T	spot cal			15min @ 15Volts		D4 3900	D3 4300	D2 4810	
42739	HD161096	17 38.5	+4° 37'	22:05	22:28	2m 17s W	+04	Fe/ND4	5-5-5
42740	HD 163506	17 51.4	+21° 04	22:33	23:50	3m 27s W	+26° 05	Fe/ND4	5-5-5
42741	η Dra. HD 215 182	22 35.3	+25° 42	00:08	01:13	00m 02s W	+38° 23	UG1/—	30 30 30
42742H	focus test							Fe/—	5 5

Spectr. Temp
Focus
Spectr. Temp
Exp. Mtr.

Spectr. Temp. ...73°F..... Dome Temp./Hum. ..... Transparency Conditions 112

Focus .....20R..... ← out by 100 units

Spectr. Temp. ...70°F..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/.68	BS	IIaO	B	should be [redacted] 77B		Steel
10/15		1.29	K2 III	"	"	BS	IIaO E	A	Std Vel	P3	s/str
20/28	3"	6.84	dK1	"	"	"	IIaO e	B	Arm Spectr	clouds	wk
							"				
40/30		3.93	K2 III	"	"	"	"	A	Std Vel		s/str
100/85		5.82	F2 Ia	"	"	"	"	B	Cph/Evans		v s/str
40/25		3.8	G8 III? K2?	RC.	G24/.9	RS	IV-N	A	Arm Spectr	V faint ... P5	very strong
							IIaO-E	B		20R 70°F	
		IV-N		5m DIG	70°	$AgNO_3$ (1:7500), H_2O rinse, exposed wet					
		IIaO e		7m DIG	70°	18 152					

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Date Aug 19/20 17 Observers RF

Emulsion Batches: I.D.E. 30330-1-1-50

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42242	HD 196 [illegible]	19 [illegible]	+10 [illegible]	22:30	23:00	00°36W	+10°31	P/14	5-5
42243	HD 196 [illegible]	19° 40 8	+29°01	21-53	01:56	03°42W	+29°14	P/14	5-5
42244	spot			15m-E 15	D2 3930	D3 4300	D2 4510		
42245	HD 222366	23° 34.9	+5-05	02:00	02:27	00°29W	+05°30'	P/14	5-5
42246	HD 3135	01° 29.9	+61°38	02 32	04 34	03°41W	+66°02'	P/14	5-5
42247	HD 13023	02h 01m	+24° 59'	04.36	04.46	00°11W	+23°55	P/14	5-5
42248	[illegible]							P/—	5-5

Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr. Sc

Spectr. Temp. ...75°F........ Dome Temp./Hum. ....40% Transparency Conditions ...clear........

very windy

Focus ....30R............

Spectr. Temp. ..63°F........ Dome Temp./Hum. ..16°C......78%

Comparison Type-Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	40/80	5	4.15	A3 III	R.C.	G12/.68	B.S.	IIa0-E	A	[illegible]		✓ s/ s5r
	40/280		6.8 7.6	F0 A1	R.C.	G12/.68	B.S.	–	B	[illegible]		✓ s/ s5r
								IIa0-E				
	80/80		4.64	F7 II	R.C.	G12/.68	B.S.	IIa0-E	A	[illegible]		s/ s5r
	20/400	5+	6.2	A4	R.C.	G12/.68	B.S.	IIa0-E	B	[illegible]		✓ s/ s5r
	40/80		3.16	A2 III	R.C.	G12/.68	B.S.	IIa0-E	A	[illegible]		s5r
					–	–	–	–	B		[illegible] OR	✓ s/ [illegible]

IIa0 20 176

115

Date 1978 Aug 20/21 Observers KK-RL

Emulsion Batches:
IIaO e 30038-18698
098 F 34035-18685

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42747	HD 124897	14 11.1	+19°42'	20.22	20:24	03.46W		Fe/ND4x	5-10
42748	HD 131511	14 48.9	+19 33	20:27	22:01	(4.47W)	+19°17	"/ND1x	5-5
42749	HD ADS 11632A #37397	16 41.7	+59 29	22.15	00 30	03 25W	+59°38	Ne/—	8-8
+270971	stupeal for plate	42747-48			90sec				
+274972	spot cal for plate	42749-			15min	15m 03 4810		Fe/—	10
42750	HD 201092	21 02.4	+38°45'	00 38	00.50			Ne/—	5 5
42751	HD 215182	22 38.3	+29°42	00:59	01:14	00h10W	+30°06	Ne/—	13 13 3 3 3
42752	"	"	"	01 15	01 22	00h18W	"	Ne/—	15 13 3 3
+275271	form tag							Ne/—	15 15 5
42753	HD 192418	20 42.5	+45°45'	01.35	01.57	03°48W	+46°01	Ne/ND4x	5 5 5 5
42754	HD 222368	23 34.8	+05°05	02.06	02.17	00h17W	+05°29	Ne/—	8 8 5 5
42755	HD 3712	00 30.2	+55°59	02 26	02.29	00h30E	+56°32	Ne/—	8 8 8 5 5 5
42756	HD 219134	23 08.5	+56°37'	02 36	03.02	01h29W	+56°01	Ne/—	8 8 5 5 5
42757	HD 216459	22 46.1	+16°19	03 16	03.50	00h37W	+16°45	Ne/—	8 8 5 5 5
42758	HD 222107	23 32.7	+45°55	03.55	04 03	02h06W	+46°20'	Ne/—	8 8 5 5 5

Spectr. Temp. 69° Dome Temp./Hum. 64 F / 77% Transparency Conditions photometric 1.6.

Focus 30R

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/30		1.29	K2III$_p$	RC	G12/68	BS	IIaO e	A	Std Vel		str.
30/120	2"	6.84	dK1	"	"	"	"	B	Fsm-Spec KK		v sl wk + f/exum
0/160		V= 8.90	dM4	RC	G43/.5	R.S.	098-02E	A	- - -	V filt over slit	v sl wk
							IIaO e				
							C13-02E			V filt on slit	
100/123		V= 6.2	dK7	RC	G43/.5	RS	098-02e	B	Std Vel	G1 Cyg B	sl str
0/150		3.8	G8III? Fe?	RC	324/7	RS	IIaO h	A	Fsm-Spec KK	V filt on slit	
40/50		"	"	"	"	"	"	B		should be 12 R	
	Poor record			"	"	"	IIaO h	B	Prog 630F 30R		
120/200		4.7	B2	R.C.	G16/.7	R.S.	098-02e	A	Std Vel	V filt in cross traverse	fine
40/80		4.64	F7II	"	"	"	"	B	Std Vel	"	fine
40/80		3.34	K0II	"	"	"	"	A	"	"	sl str
40/ 50		6.57	K3V	"	"	"	"	B	RSCM/Fe	"	fine
80/160		6.47	gK1	"	"	"	"	A	"	"	fine
40/50		V 3.8	K0	"	"	"	"	B	"	"	v sl str

117 #2

Date ..... Observers .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
#2739	HD 1502	00 40 0	+27 08	04 08	04 19	01 10 W	+24 07	Hg/—	5 s
#2740	HD 12727	02 04	+26 59	04 30	04 34	00 07 W	+25 23	Hg/—	5 s
#2741	HD 17879	02 55	+27 41	04 39	04 43	00 32 E	+26 02	Hg/—	5 s
#2742	[illegible]							Hg/—	5 s
#2743	[illegible]							Hg/—	5 s

Spectr. Temp.
Focus .....
Spectr. Temp.

Exp. Mtr Seen

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 118.

Focus ..... 30R .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 59°F

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Iris/To		5 30	to	RC	6½/7	RS	0802	A	ES Cu, Fe;	V Eu, Sm, Sr.	VS/ str
?/40		3 15	42	"	"	"	"	B	STD VEL		S/ str
30/F2		5 1/2	42	"	"	"	"	A	STD VEL.	"	S/ str
				"	"	"	"	B	"	50°F should be 01 R	S/ red
				EC	2½/ 0F	8S	IIaO	B	"	50°F should be 96B	S/ red
				IIaO 8m Dig 67°F							
				O2E 5m Dig 68°F							
				IVNh 5m Dig 67°F				1:7500	$AgNO_3$; isopropyl alcohol		

119

Date ...11/8 Aug 21/22... Observers ...Roi - KK...

Emulsion Batches: ...IIaO E ... 30038 ... 20088 ...

Spectr. Temp ...
Focus ...
Spectr. Temp ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
42762	HD 161096	17 38.5	+ 4° 37'	20:22	20:28	0:29 W		Fe/ND4x	5-5-5	20/40
42763	HD 163506	17 51.4	+ 26° 4'	20:33	20:52			Fe/ND4x	5-5-5	80/80
42764	HD 186791	19 41.5	+ 10° 22'	20:55	21:00	1:03 E		u	5-5-5	20/40
42765	HD 186688	19 40.8	+ 29° 01	21:03	22:08	00°06 W	+ 29° 13'	u	5-5-5	20/40
42765½	Cap Fog			15m @ 15 Volts		D4 3500 D3 +500	D2 4810			
42766	HD 186791	19 41.5	+ 10° 22	22:11	22:16	00°13 W	+ 10° 25		5-5-5	20/40
42767	Cyg X-1 HDE 226868	19 58	+ 34° 56'	22:27	01:31	03°16 W	+ 35° 09	Fe/ND4x	5-5-5	80/80
42768	HD 202 903	20 22.8	+ 48 12'	01:35	01:46	01°30	+ 04 34	Fe/ND4x	5-5-5	20/40
42769	Cyg OB2 #7	21 32.9	+ 45° 55	01:58	02:13	00°19 W	+ 44° 01	Fe/ND4x	5-5-5	20/40
42770	HD 208 668	21 39.8	+ 05 05	02:17	02:39	00°44 W	+ 03° 50	Fe/ND4x	5-5-5	20/40
42771	"	"	"	02:43	02:57	01°01 W	"	Fe/ND4x	5-5-5	20/40
42772	HD 217 811	22 55.6	+ 43 31	03:03	03:41	00°23 W	+ 43° 57	"	5-5-5	20/40
42773	HD 218 393	23 01.7	+ 64° 38	03:51	04:25	00°40 W	+ 64° 02	"	5-5-5	20/40
42774	HD 224 631	23 51.1	+ 00° 05	04:30	04:38	00°13 E	+ 00° 19	"	5-5-5	20/40
42775	HD 16894	02 53.1	+ 3° 42	04:42	04:50	00°21 E	+ 04 03	"	5-5-5	20/40
42775½	Uranus Trail							Fe/ND4x	5-5	

Spectr. Temp. 69° Dome Temp./Hum. 68°/77% Transparency Conditions Some Cirrus 120

Focus 30R

Spectr. Temp. 65°F Dome Temp./Hum. 16°C/100% some focus problems this night probably due to plates having been cut sl. long

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/40		3.93	K2 II	RC	G12/.68	BS	IIaOe	A	Std Vel		fine
80/80	1"-2"	5.82	F2Ia	RC	G12/.68	BS	IIIaOe	B	Cph/Fe	89 Her	vsl. stm focus!
20/40		4.15	K3 II	"	"	"	"	A	Std Vel		fine
200/140		~7	F0-G1	"	"	"	"	B	Cph/Evans	SU Cyg	exp fine focus varies
							IIIaO-E				
20/40		4.15	K3 II	RC	G12/.68	BS	"	A	Std Vel		fine
80/80		7.74	G9 IIIa	"	"	"	"	B	Sp Bl/Rk	not at zero	sl wide exp
40/80		5.9	K0	"	"	"	"	A	Std Vel		
40/150		4.96	G5 III	"	G6/1.25	BS	"	B	H+K-Hγ		focus?
40/100		4.62	F2 V	"	"	"	"	A	Std Vel		fine
40/32		1	-	RC	G12/.68	120μ	"	B	"	exp on	sl fog ??
20/120	1"-2"	6.1	B3	"	"	"	"	A	"		sl fog ??
100/200		4.2	A6	"	"	BS	"	B	"		fine
80/80		5.2	F9	"	"	"	"	A	"		v sl stm
20/60		4.16	M2 III	"	"	"	"	B			fine
		8" Dia	63°F	17 166			should be	3R			

121

Date 24/25 Aug 1972 Observers Fg - Ri

Emulsion Batches:
098.03 30028 - 18088
098.02 30038 - 22088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42776	HD 163096 β Oph	17h 38.5	+4° 37	20:20	20 25	0h 29W	+4 35.5		
42777	HD 163930	17h 53	+15° 08.9	20:30	22:24	2h 13W	+15 07.7		
42777T1	spectral for plate 42776	7?		15 min @	D3150 4810		D170 Hα	D2 5450	
42778	HD 186791 δ Aql	19h 41.5	+10° 22	22:27	22:32	00° 33W	+10° 33		
42779	HD 210324	22h 04.6	+45° 15	22:37	23:30	00h 52E	+45 37.3		
42780	HD 219113	23h 08.3	+02° 08	23:34	02 27	01h 03W	+02 34		
42780T1	spectral for plate 42778			15 min @	D3150 4810	D170 Hα	D2 5450		
42780T1	[illegible]							Fe/—	8-8

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr

Spectr. Temp. 74°F Dome Temp./Hum. 22°C 50% Transparency Conditions Hazy 1.22

Focus 0.R.

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/40		V=2.72 3.93	K2 III	RC	G16/1.7	RC	098-02 *	A	Std Vel St.	Vel. from [illegible]	vs/sm
300/350		V= 6.4	F4	RC	G16/1.7	RC	098-02 *	B	RS Cn1/F2	"	vs/wk
							098-02				
20/40		V=2.62 4.5	K2 III	RC	G16/1.7	RS	098-02	A	Std Vel	"	vs/sm
300/352		V=6.9	G5	"	"	"	"	B	RSCn1/F2	"	vs/wk
300/350		V=7.3	G5	"	"	"	"	A	RSCn1/F2	"	vs/wk
							098 w E				
				RC	G16/1.7	RS	"	B	Temp 70°F	0.2m	good
				5 1/2m	Dif	67	F * 21	147			
							17	138			

123

Wed-Thurs

Date 23/24 Aug. 78 Observers Tn

Emulsion Batches: IIaF

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42780F2	Hartman Focus Test					0h 0	+44°	Fe —	23 23
80F3	"					"	"	"	23-23
80T5	Flexure Tests		[Comp @ 0h] [Stellar @ 4'W]				"	Fe/—	15-15
80T6	"		[Comp @ 4'W] [Stellar @ 0h]				"	"	15-15
80T7	"		[Comp @ 2'W] [Stellar @ 2E]				"	Fe —	15-15
80T8	"		[Comp @ 2'E] [Stellar @ 4'E]				"	"	15-15
80T9	"		[Comp @ 4'E] [Stellar @ 0']				"	"	15-15
80T10			[Comp @ +44°] [Stellar @ -10°]			@0h	"	"	15-15
80T11			[Comp @ 0'] [Stellar @ 3'30E]				0° dec	"	15-15
80T12			[Comp @ 3'30E] [Stellar @ 2'E]				"	"	15-15
80T13	"		[Comp @ 2'E] [Stellar @ 2'W]				"	"	15-15
80T14	"		[Comp @ 3'30W] [Stellar @ 0']				"	"	15-15
80F4	Hartman Focus Test						0° dec	"	30-30

Spectr. Temp. 74°F ..... Dome Temp./Hum. ..... H=85% Transparency Conditions ..... Cloudy 124

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Temp +74°F	Set at OR (not changed from last)			RC	G16/.7	RS	IIaF-e	B	1		
+74°F	Set down to 50B			"	"	"	"	B			
	Set up to 30B			"	"	"	"	B	center shift +4μ		
				"	"	"	"	A	−8μ	sl wy	
				"	"	"	"	B	+2.5μ	sl wy	
				"	"	"	"	A	+9μ		
				"	"	"	"	A	−14μ		
				"	"	"	"	B	+24μ	EY	
				RC				A	+6μ		
				"				B	−4μ		
				"				A	−2.5μ		
				"				B	−8μ		
Set to 30B or −30R			Temp +73°F	RC				C	−		

125 II/ F 5-t

Date 21-25 Aug. 1955 Observers T.

Emulsion Batches:
103aE 3003.8 - 22086
IIaD-E 3003F - 22048

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42781F1	Focus test to determine		Shift/Sec. dial,			0h no drive	0°	Fe/—	
42781F2	"		"	"		0h "	0°	"	
42781F3	"		"	"		0 "	0	"	
42781	HD 161096 80pk	17 38.5	+4 37	19 59	20 08	0 24 W	+4 37	Ne/— Fe/—	
42782	"	"	"	20 11	20 24	0 41 W	"	Ne/— Fe/—	
42783	HD 179994	19 08.1	+52 16	20 36	21 50	0 40W	+52 24	—/—	8-7-8 8-8-8
42783T	Spot Calc for 42781-84.				15m @ D 3 15V 4810		D 1 7V H 3	D2 7V 5430	
42783F	Focus test				@	0 45W	+52 24	Fe/—	?-28
42784	HD 186791	19 41.5	+10 22	22 05	22 09	0 22W	+10 35	Ne/— Fe/—	12-12 12-12
42785	HD 215182	22 38.3	+29 42	22 42	22 54	1 48 E		Ne/—	15-15-15
42785T	15s Ne comp		15s Ar stellar						
42786	HD 186688	19 40.8	+29 01	23 15	00 49	3 04W	+29 14	Fe/—	5-5-5
42786T	Spot Calc for 42786-90.				15 min @15V	D4 3450	D3 4300	D2 4810	
42787	HD 212943	22 32.8	+04 12	00 54	01 12	0 44W	+4 38	Fe/—	5-10-5
42788	"	"	"	01 24	0 53	1 24 W	"	"	5-5-5
42788F						1 25W	"	"	

Spectr. Temp
Focus
Spectr. Temp

Exp Mtr | So

Spectr. Temp. 65°F + ... Dome Temp./Hum. 64°F / 76% Transparency Conditions hazy / scattered clouds

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... /

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Focus [illegible]	From	-30R up	to +50R	RC	G16/17B	RS	IIIa F	B	Temp 65°F +	+6m (32) [illegible]	cent vs red
Focus [illegible]	From	+50R → -50R					"	B	Temp 65°F +	-27m (31)	century blue
Focus [illegible]	From	-50R up	+20R				"	B	Temp 65°F +	-4m (32)	cent vs blue
40/80	1"	V=277 3.93	K2 III				OaF+aE	B	[illegible]	V filter [illegible]	[illegible]
40/80	2"	"	"				"	B	*Tob arc Ne	[illegible]	[illegible]
200/400	1"	V=510	K0				"	B	RSC Va-Fgi	[illegible]	[illegible]
							"				
				KC	G16/17B	RS	IIaF	B	Temp +65°F	Set +20R -3m	cent vs [illegible]
20/47	2"	V=2.9	K2 III	"	"	"	OaF+aE	B	stable		[illegible]
40/100		V=2.9		"	G12/13	RS	IV-N h	A	Asia Spec KC	V filter [illegible] Day sheen	exp good fog horrible
				"	"	"	IV N h	A			
200/140	3"	~7	F0-G1	"	G[illegible]	RS	IIaO	A	Eyal Sys	[illegible]	Fine
							"				
40/40		5.9	K0	KC	G[illegible]	RS	"	B	Stable	-3m	Fine
40/30	3"	"	"	KC	"	[illegible]	"	A	"	[illegible] V shift	Fine
				"	"	120μ	IIaO*	B	Set +20R	+63°F * Extra long plate [illegible]	[illegible]

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Date ..... Observers .....T.....

Emulsion Batches:
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Spectr. Temp
Focus .....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
42789	HD 3712	00 31.8	+55 59	02 10	02 15	0 25E	+	Fe/Ce	5-10	4 1/4
42790	"	"	"	02 25	02 29	0 11E		"	5-10	4 1/2
	IIaOs	strips	D19 for	23 mins	by accident - They fell in					17 1/3
		spot	D19 for	8 mins -						

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 128.

Focus .....

Spectr. Temp. 53°F ..... Dome Temp./Hum. 60°F / 97%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/44	2"	3.34	KO II	RC	5400Å	150μ	IIaF	B	std vel	y shift?	Type
40/50	1.5"	"	"	"	"	BS	"	B	std vel	* Fe Arc double	Fino Sky
					*All a thought that BS did fit well - Took something to seat it. Still didn't feel right.						
				098s +II aF		5min @ 67°F			D19 21172	Too tight.	
					From 42781 As 42781 F) measures,					For 100 units of red center shift is 33μ Blue	
					∴ For center Blue increase Rad by 3 units/μ shift.						
					Remember to set by decreasing Rad's, and by at least 40 units.						

129 2 Large Tests 2.5 hrs

Date 26-27 Aug 1978 Observers J.M.

Emulsion Batches: 098-02E 30038-25038

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42791	HD 200391	20 58.1	+27 25	22 47	01 28	2 29W	+27 44	FC/ND=4 No/—	9-9-9 9-9-
4279 1T	Spool Calc	for 4279 1-92			15 min @	15V D3 4810	7V D1 H2	7V D2 5450	
42792	HD 212943	22 20.8	+01 12	01 33	01 50	1 26W	+04 36	Fc/ND=1 No/—	9-9- 9-9-9
42792F	Focus Test		[Comp-	Numb]	[Stellar	Sing t]	11	Fc/—	2 9-2

Spectr. Temp. 67°F ..... Dome Temp./Hum. 63°F / 96% Transparency Conditions ... Sl. Hazy ..... 130.

Focus ... +20 R .....

Spectr. Temp. 65° °F ..... Dome Temp./Hum. 57°F / 1105 Exp meter seems unstable

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~40~~ 80/150	1-2"	7.72	GO	RC	G16/78	RS	098 mE	A	RSCH-Fi	V F in beam Exp meter [illegible]	wk
							"				
80/150	2"	5.9	KO	RC	G16/78	RS	"	B	Sejuel		Fine
(at 0°HL)				"	"	"	IIaF	B	Set +20R	Temp 65+°F	
All done	5 min	D/9 @	68°F						Too dim	I - Bore sights	
						—	Should have worked			in the dark	
						—	Know Red	Focus	Hg, Neon, Ne		
									Fair for	[illegible]	

131

Date 29/30 AUG. TUES/WED Observers But-Tn

Emulsion Batches: IIa-e 30038-22038

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seen
42793F	Focus Tests To determine Set/disp rel/ots 100 unit					0	+4 30°	Fe/—	28-28		
9372	" "	"	"	"	"	0	"	"	28-28		
9373	Regular Focus Test					0	"	"	28-28		
42793	HD 161096	17 38.5	+4 37	19 48	19 52	0 23W	—	Fe/ND×4	5-[illegible]	4½	
42794	HD 168481	18 14.8	+15 47	20 06	22 23	02 20W	+15 54	Fe/ND×4	5-5-5	10½	
42794T	Spot Calc for 42794-98			15 min @ 15V		D4 4300	D3 3900	D2 4810			
42795	HD 190165	19 58.6	+45 11	22 30	01 56	04 09W	+45 28	Fe/ND×4	5-5-5	18	
42796	HD 222368	23 34.8	+05 05	02 00	02 20	00 56W	+05 35	Fe/ND×4	5-5	10½	
42796F	Focus Test					"	"	Fe/—	5-5		
42797F	"					"	"	Fe/—	5-5		
42797	HD 222368	23 34.8	+05 05	02 29	02 54	01 30 W	"	Fe/ND×4	5-5-5	10½	
42798F	Focus Test					"	"	Fe/—	5-5		
42798	HD 222368	23 34.8	05 05	02 58	03 23	02 00 W	"	Fe/ND×4	5-5-5	20/10	

Spectr. Temp. ...+71°F..... Dome Temp./Hum. +65°F/80% Transparency Conditions ...Sm. a. cloud.....1.3?

Focus ...was 20R-.....

Spectr. Temp. .....63°F..... Dome Temp./Hum. +58°F/99% dipping starting

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G2/688	BS	IIIa-J	B	Set +35R	Temp +71°F cent vs/Red	
				"	"	"	"	B	Set -65R	+71°F cent vs/blue	
				"	"	"	"	B	Set -15R	should be +71°F correct posn cent vs/blue	
40/40	1"-2"	3.93	K2III	RC	G12/688	BS	IIIa-J	A	Std Vel	Vega into Filter in	Fine
100/160		7.08	F0	RC	G12/.68	BS	IIIa-J	A	Sp-MK	#2 mask in Exp meter in	Fine
note difference in Spot Calc						8mm @ 67°F D19 Aug 1978					
100/188	3"	7.58	A2	RC	G12/.688	BS	IIIa-J	B	Am MK	Temp 68°F Focus +30R	s/wk
100/179	2-3	4.64	F7V	RC	"	"	"	A	Std. SM Vel		Fine
				"	"	"	"	B		Set +30R Temp 65°F cent vs/blue	
				"	"	"	"	B		Set +60R 65°F more Red cent s/Red	
100/184	2"	4.61	F7V	"	"	"	"	A	Std Vel	Set +60R "	Fine
				"	"	"	"	B		Set 0R 64.5°F more blue cent vs	
100/180	2"	4.64	F7V	"	"	"	"	A	Std Vel	" 64°F- Poor Focus Fair	
				42193F1 - 42193	Rev	@ 68°F	in 019	TH		Temp up for atmospheric	

133

Date Aug 30 78 Observers RL - BLS

Emulsion Batches:

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Spectr. Temp.

Focus .....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seen
42798F1	focus test							Tc/—	5 s		
42798F2	"							"	"		
42798F3	"							"	"		
42798F5	"							"	"		
42798F4	"							"	"		
42798F6	"							"	"		
42798F7	"							"	"		
42798F8	"										
42798F9											

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 134

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				R.C.	G12/.68	120μ	IIaO E	B	T. 66°F	F. +10R	
						120μ		B	T "	Focus OR	
						120μ		B	"	Focus -10R	
				R.C.	G12/.68	BS	"	B	"	" +10R	
				"	"	BS		B		OR	
				"	"	BS		B		-10R	
						RS		B		+20R	
						R.S		B		+10R	
						R.S		B		OR	

135

Date 1973 AUG 30/31 W/Th Observers DL. Tn

Emulsion Batches:
Tu-e 30038-29088
098-02e 30038-25098

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42799F1	Focus Test					0° 10ᵐ W	+30°	Fe/—	11-11
42799	HD212097	22ʰ 16ᵐ.7	+27° 50'	21.52	22:07	01 56E	+28 15'	Fe/NaK4	9-9
42800	HD212097	22ʰ 16ᵐ.7	+27° 50'	22:09	22:26	01 37E	"	"	9-9
42801	HD212097	22ʰ 16ᵐ.7	+27° 50'	22:27	22:41	01 21E	"	"	9-9
42802	HD212097	22ʰ 16ᵐ.7	+27° 50'	22 42	22 57	01 06E	"	"	9-9
42803	HD212097	22ʰ 16.7	+27° 50'	22:58	23:11	00 51E	"	"	9-9
42804	HD212097	22ʰ 16.7	+27° 50'	23 14	23:29	00 33E	"	"	9-9
42805	HD210334	22ʰ 09.6	+15° 15'	23 53	01 12	01 22W	+45 39	Fe/NaK4 Ne/—	9-9-9 9-9-9
42805T1	Spot Caln for 42779-42804			15 min	@ 15V:	D4 3900	D3 4300	D2 4810	
42805T2	Spot Caln for 42805-06.			15 min	@ 15V D3 4810	7V D1 Hα	7V D2 5450		
42806	HD219113	23 08.3	+02 08	01 19	04 52	03 59 W	+2 37	Ne/—	9-9-9 9-9-9
42806F1	Focus Test — Hγ & diff					4ʰ W	"	Fe/—	9-9
42806F2	"					0ʰ	"	"	9-9

Spectr. Temp
Focus
Spectr. Temp

Exp. Mir.

Spectr. Temp. 69°F ..... Dome Temp./Hum. 65°F / 95% Transparency Conditions ..... d .....

Focus 30R .....

Spectr. Temp. 64° ..... Dome Temp./Hum. 60°F / 93%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				R.C.	G12/168	BS	IIIa-JE	B	T= 69°F	Focus = 30R	
20/15		4.83	B8V	R.C.	G12/168	BS	IIa-0E	A	Pixel Std.		
20/15	5"	4.83	B8V	R.C.	G12/168	BS	IIa-0E	B	"		
20/16		4.83	B8V	R.C.	G12/168	BS	IIa-0E	A	"		
20/15		4.83	B8V	R.C.	G12/168	BS	IIa-0E	B	"		
20/15		4.83	B8V	R.C.	G12/168	BS	IIa-0E	A	"		
20/15		4.83	B8V	R.C.	G12/168	BS	IIa-0E	B	"		
200/450	3-4"	7.30	G5	RC	G6/7B	RS	098-0E	B	RSC Std-Fg1	66.5°F seeing & focus much better for 2nd half	
	5mm	@ 67°F	D19		31 Aug 78		IIa-0E				uneven fog
					31 Aug 78		098-0E				
200/247	2"	V=7.31mux 9.0	G5	RC	G6/7A	RS	"	A	RSC Std-Fg1	1st ½ hr exp in stellar thin cloud	
				"	"	"	"	B	Set +30R	Temp 64°F+	cirrus blue
				"	"	"	"	B	"	"	blue

137

Date 31 Aug/1 Sept 78 Observers Fqi-Tn-Bts

Emulsion Batches: 098-02E 30038-31088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. / Exp Mtr	Focus / Spectr. Temp / Seeing
42805F3	focus test							Fe/—	10/10		
42805F4	focus test							Fe/—	10-10		
42805F5	focus test							Fe/—			
42805F6	Focus test					0h	+30°	Fe/—	10		
42807	HD 161096	17h 38.5	+4° 37'	19 39	19 51	0 32 W	4° 33	Fe/—	10-10-10	20/35	
42808	HD 163930	17h 53	+15° 08.9	20 03	22 15	2 40W	+15 07	11	10-10-10	19/400	
42808T	Spot Calib for	42807 —	15	.15 min	@ 15 V D3 48.0	7V D1 7V D2 H2 : 54.50					
42809	HD 210334	22h 04.6	+45° 15	22 33	23 23	0h 22E	+45 36	Fe/—	10-10	20/43	
42810	HD 210334	22h 04.6	+45° 15	23 24	00 10	0h 24W	+45 36	Fe/—	10-10-10	20/43	
42811	HD 219113	23h 08.3	+02° 08	00 23	03 06	2 17W	+02 32	Fe/—	10-10-10	20/400	
~~42812~~	BD 29° 376 HD 13746	Adjust 1900 02 09	+29° 55'	03 18	03 58	0 08W	+30 16	Fe/—	10-10-10	20/30	
42813	HD 13480A	02 06.6	+29 50	04 03	04 27	0 40W	+30 11	Fe/—	10-10-10	20/35	
42814	HD 13480A	02 06.6	+29 50	04 30	04 54	1 06W	+30 11	Fe/—	10-10-10	20/30	
42815	HD 12929	02 01.5	+22 59	04 57	04 59	1 16W	+23 21	Fe/—	10-10-10	20/30	
42815F								Fe/—	10 30		

Spectr. Temp. +67°F ..... Dome Temp./Hum. 66°/77% Transparency Conditions .....

Focus . was 20R – 28R .....

Spectr. Temp. +62°F ..... Dome Temp./Hum. 58°F/72%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				R.C	316/.70	RS	098	B	Temp 64°F	40R	
				RC	"	RS	098	B	"	32R	
				R.C.	"	RS	098	B	"	24R	
				"	"	RS	098	B	Temp +67°F	set at 28R	
200/350	1½"	3.93	K2 III	R.C.	G16/.70	RS	098-02-e	A	Std Vel Star	B Oph	Fine
00/400	"	V=7.4	F4	"	"	"	"	B	RS CVn/Fgi		
			Rep 178		5mm @ 68°F		D19			Labeled 168	
00/408	½"	V=6.9	G5	RC	G16/.70	RS	098-02-e	A	RS CVn/Fgi	Set at 35R	
60/405	"	V=6.9	G5	RC	G16/.70	RS	098-02-e	B	RS CVn/Fgi	900/Aurora	Fine
200/400	"	V=7.3	G5	RC	G16/.70	RS	098-02-e	A	RS CVn/Fgi		
200/58	2"	~~B=7.3~~ V=5	~~K8~~ G5 III	RC	G16/.70	RS	098-02-e	B	~~RS CVn/Fgi~~	Wrong star/point	
200/355	"	V=5	G5 III	RC	G16/.70	RS	098-02-e	A	RS CVn/Fgi		
00/327	"	V=5	G5 III	RC	G16/.70	RS	098-02-e	B	RS CVn/Fgi		Fine
20/36		3.15	K2 III	RC	G16/.70	RS	098-02-e	A	Std Vel Star		
				"	"	"	"	B		42°F — Cent vs blue	

139 Fr. Sat

Date 12 SEPT. 1978 Observers Tn - Bts

Emulsion Batches: 098-02E 30038-31088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42816	HD 210334	22h 04.6	+45° 15	19 56	21 05	2 37E	+45° 40	Ne/— Fe/ND4	8-8-8 8-8-8
42816T	Spot Calib for	42816	−20.		15 min	15VD3 @ 480	7VD1 Hα	7VD1 5 50	
42817	HD 210334	22 04.6	+45 15	21 10	22 16	1 26E	+45 39	Ne/— Fe/ND4	8-8-8 8-8-8
42818	HD ~~216489~~ 213389	22 26.0	+48° 51'	22 24	23 26	0 37E	49 15	Ne/— Fe/ND4	8-8-8 8-8-8
42819	HD 219113,	23 08.3	+02 08	23 41	02 21	1 36W	+2 35	"	8 8 8 8 8 8
~~42819T~~	~~Focus Test~~ 1 Psc						"	Ne/— Fe/—	8 8
42820	HD 222368	23 34.8	+05 05	02 32	02 54	1 42W	+5 33	Ne/— Fe/ND4	8-8-8 8-8-8

Spectr. Temp
Focus Left
Spectr. Temp

Exp. Mtr

20 / 4.0

4 / 7.1

Spectr. Temp. 68°F Dome Temp./Hum. 67°F/79% Transparency Conditions S/Hazy

Focus Left of 50R → 30R now 140

Spectr. Temp. 63 °F Dome Temp./Hum. 59°F/96%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/420	2"	V=7.0	G5	RC	G16/78	RS	098-02E	A	RSCVn/Fgi	Set 30R	conf str fine
200/415	1½"	V=7.0	G5	RC	G16/78	RS	098-02E	B	RSCVn/Fgi		fine
200/380	2"	V=6.38	K0	RC	G16/78	RS	098-02E	A	RSCVn/Fgi		sl wk
300/310	1½"	V=7.3	G5	RC	"	"	"	B	"	Dome problem. (Cloud up)	wk
~~———~~	~~———~~	~~———~~	~~———~~	"	"	"	"	B	~~Set 30R Temp ?~~	~~———~~	~~———~~
40/71	3"	V=4.13	F7V	RC	G16/78	RS	098-02E	A	SdV01	Cloud over to the west. Dome.	Fine
			Note- after 1st Comp on i PSC, Plate cap came down.								
			ie Plate hadn't been properly uncapped								

141 Sept-Sun

Date Sept. 2-3.178 Observers In

Emulsion Batches: 098-02E 30038 - 01098

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42821	HD 161096 B0ph	17 38.5	+4 37	19 31	19 37	0 24W	+4 34	Fe/Ne.4 / Ne/—	8-8 / 8-8
42821F	Focus Test					0h	"	Fe/— / Ne/—	8-8 / 8-8
42822	HD 163930	17 53	+15 09	19 49	22 10	2 43W	20 EST +15 6.7	—/—	8-8 / 8-8
42822T	Spot Calib for 42821	−22			15 min	@ 15V D3 4810	7V D1 Hα	7V D2 5450	

Spectr. Temp
Focus -3.5
Spectr. Temp

Exp. Mtr

Spectr. Temp. +71°F Dome Temp./Hum. 73°F/72% Transparency Conditions Sl Hazy OK

Focus +2.5R

Spectr. Temp. 70°F Dome Temp./Hum. 66°F/80%

Decker not used tonight.
All changes by hand.

142

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/36	1"	3.93	K2 III	RC	G16/7B	RS	098-05E	A	Std Vel		comp s/str sl str
note-Decker not right		approx	may be spoiled	"	"	"	"	B		exchange ze	
200/265	2"	V=7.4	F4	"	"	"	"	A	RSCVn-Fgi	Temp +71°F short piece cloud	comp str sl wk
							"				

143 Sun - Mon

Date Sept 3-4 78 Observers TM

Emulsion Batches: IIaO-E 30038 – 31088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42823	HD 212097 32 Peg	22 16·7	+27 50	22 51	23 08	039 E	+28 12	Fe/NDA	9-9
42824	"	"	"	23 10	23 32	015 E		"	9-9
42825	"	"	"	23 33	23 55	008W		"	9-9
42826	"	"	"	23 58	00 19	032W		"	11-9
42827	"	"	"	00 22	00 44	057W		"	9-9
42827T	Spot Calib	for 42823–36, 42			15 min @ 15V		D4 3900 D3 4300	D2 4810	
42828	HD 222368	23 34·8	+5 05	00 48	01 03		+05 29	Fe/NDA	9-9
42829	HD 19356	03 01·7	+40 34	01 10	01 12	3 20E	+40 51	"	9-9
42830				01 16	01 19	3 13E			9-9
42831				01 21	01 23	3 09E			9-9
42832				01 33	01 35	2 57E			9-9
42833				01 36	01 39	2 53E			9-9
42834				01 43	01 46	2 46E			9-9
42835				01 47	01 50	2 42E			9-9
42836				01 51	01 53	2 39E			9-9

Spectr. Temp
Focus +35
Spectr. Temp

Exp. Mir	Se
20/16	
20/16	
20/16	
20/17	
20/17	
20/15	
20/15	
20/16	
20/15	
20/16	
20/15	
20/16	
20/18	
20/15	

Spectr. Temp. 66°F Dome Temp./Hum. 64°F / 90% Transparency Conditions . Clear by 22:30 ...

Focus +35 R

Spectr. Temp. ..... Dome Temp./Hum. ... / ...

144

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/16 *	bad ?	4.83	B8V	RC	G12/608	BS	IIaO-e	A	Algol/std	* V Filter left tic (Eyepiece)	
20/16	4" ?	"	"	"	"	"	"	B	"	#2 BS mark inserted	
20/16		"	"	"	"	"	"	A	"		
20/17	3"	"	"	"	"	"	"	B	"	* Star's trajectory on finder	
20/17		"	"	"	"	"	"	A	"		Fine
							"				
20/15	2-3"	4.68	F7V	RC	G12/608	BS	"	B	std vel	* as switch from Exp → Comp misfire Fe Hi on std ?	
20/15	"	2.0	B8V					A	Algol prog		Fine
20/16								B			
20/15								A			fine but scratched
20/16	1-2"							B			Fine
20/15								A			Fine
20/16								B			Fine
20/18								A			
20/15								B			

145 #2
Cont'd

Date Sept 3-4 Observers T.H.

Emulsion Batches: Ilford 31058 -31088

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
42837	HD 19356	3 01.7	+40 34	02 02	02 08	2 24E	+40 50.8 ?	Fe/—	9-9	30/60
42838	"	"	"	02 09	02 22	2 10E	"	"	9-9	60/75
42839	"	"	"	02 25	02 37	1 55E	"	"	9-9	60/75
42840	"	"	"	02 38	02 48	1 44E	"	"	9-9	60/75
42841	"	"	"	02 52	03 01	1 31E	+40 50.6	"	9-9	60/75
42841F	Focus Test							Fe/—	40-30	
42841T	Spot Color for 42837-41				15 min @	17.5V D4 3900	15V D4 4300	15V D4 4810		
42842	HD 16855	02 37.1	+43 07	03 15	05 05	0 57W	+43 24.8 24.9	Fe/No. 4	9-3-5	240/165
42842F	Focus Test					1" W	"	Fe/—	25-25	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . Photometric .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. . 50°F/100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/60		2	B&V	RC	G12/1688	BS	IIa-e	B	Algol prog		Fine
20/75	1-2"							A			Fe str Fine
20/77								B			S/str
20/75								A			Fe str s/st
20/80								B			Fe str Fine
								A	Set 735R	Temp +60°F	cent fine
300/165	2-8	6.7	A2	RC	G12/1688	BS	IIa-e	B	Am MR	bad seeing (stored as Focus Test) Spoiled —	
				"	"	"	IIa-e	B	Set 145R	Temp +57°F [2 plates stuck together?]	cent s/blue

** BS very tight on removal — Must be a low Temp effect — I noticed on another cool night & got double lines on that Digilit's last Exp.

147

Emulsion Batches: IIaO-E 30038 ~ 04098

Date SEPT. 4-5 / MON-TUES Observers B.M. - J.N. - B.H.S.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42843	HD 222207	23h 33m.5	+41° 57'	00 20	01 20	0021W	+42° 23'	FE/NDx4	5-5-5
42844	HD 16855	02h 37m.1	+43° 07'	01 31	02 40	0124E	+43° 26'	FE/NDx4	5-8-5
42844T	spot calibration for 42843-46				15 @	15V 3900	D4	15V 4300	D3	15
42845	HD 18337	02h 51m.7	+59° 11'	02 50	05 02	0043W	+59 28	Fe/NDx4	5-6?
42846	HD 29139 (2 Eqw)	04 30.2	+16 18	05 09	05 11	0045E	+16 27	"	8-8
42846F	Focus Test					0 40E	"	Fe/—	8-8

Spectr. Temp.
Focus +35
Spectr. Temp.

Exp Mtr | Secm

Spectr. Temp. ...66°F..... Dome Temp./Hum. 64°F / 90% Transparency Conditions ...Fine ... some ... at end

Focus ...+3.5R.....

Spectr. Temp. .63°F..... Dome Temp./Hum. 60°F / 93%

148

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300/180	1"	6.77	B9	R.C.	G12/.68B	BS	IIaOE	A	Ap MR	* maybe some arc on stellar	arc on stellar
200/180	1.5"	6.7	A2	R.C.	G12/.68B	BS	IIaOE	B	Ap MR		fine
D3 D2										Note: 42843 labelled 44	
300/180	1.2"	7.85	A0	R.C.	G12/.68B	BS	IIaOE	A	Am MR	42844 labelled UC– 42845 labelled SA	fine arc fingerprints arc on stellar
/19	1"	2.39	K5III	R.C.	"	"	"	B	Bnt. Std.		
				"	"	"	"	B	Set +3.5R Temp +63 °F–		sl. blue
				8m D19	68°F						

149 Tues.-Wed

Date Sept. 5-6, 78 Observers Bts-But-Tn

Emulsion Batches:
IIaO-e 30038-04098
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42847	HD 156547	17h 13.1m	+26° 00'	19h 44m	21 53	03 18 W	+25° 54'	Fe/no×4	5-5-5
42847T	spot calibration for 42847 -				15. @	15V 04 3900	15V 03 4300	15V 02 4810	
42847F	Focus Test							Fe/—	5-5

Spectr. Temp.
Focus -45
Spectr. Temp.

Exp. Mtr | Seco
200/152

Spectr. Temp. ...+69°F..... Dome Temp./Hum. 69°F / 90% Transparency Conditions ..Hazy - Cloudy.....

Focus .+45R.....

Spectr. Temp. ..+70°F..... Dome Temp./Hum. 68°F / 96% 150

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/152	2"	704	A1	RC	G121/688	BS	IIaD-e	B	ApMR	CLOUD	fine
							"				
				RC	G121/688	BS	"	B	set+45R		v sl red
				8m D19 68°F			19, 164				

Comparison Type Filter Exp.

R/— 55

151 No 2-Thurs

Date Sept 6-7/78 Observers Ros-Ri-Ells

Emulsion Batches:

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Spectr. Temp

Focus

Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
42847	HD176658	$19^h 40.8$	+29° 01	$21^h 10^m$	21:44	00"46W	+29° 09'	Fe/ndx4	5-10	400/51
42848F1	focus test							Fe	5-5	
42848F2	focus test							Fe	5-5	

Spectr. Temp. 76° Dome Temp./Hum. ..... Transparency Conditions Hazy

Focus 30R

Spectr. Temp. ..... Dome Temp./Hum. .....

152

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/51		6.8 -7.66	FO -G1	RC	G12/1.68B	B.S	IIaO-E	B			v wk
				RC	G12/1.68B	BS	IIaO-E	B	blue ok- Red/Red		v sl red
				RC	G12/1.68B	BS	IIaO E	B	76°F 30R with the focusing nut tightened up and new clamping ramps in the P.H. A & B		sl red
					see next page						

Comparison Type/Filter Exp.

Fe Ardm 5-10

Fe 5-5

Fe 5-5

153 Sol Sea

Date . Sept. 9-10. 1978. Observers Watalo - Ri - Bts .....

Emulsion Batches:
IIaO-E 30038-04098
.....
.....

Spectr. Temp.
Focus .....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
42849	2 CAS HD 3712	00h 34.8	+55° 59	01.08	01.15	00h 26E	+56°24	Fe/NDX4	5-5-5	4.3
42850	wrong— HD 218634	23h 04.5	+08°08	01:29	02:07	01h 57W		Fe/NDX4	5-10	2m/ 5
42850F1	spectral			15mm @ 15 Volts	D4 3900	D3 [illegible]	D2 4810			
42850F1	focus test							Fe/—	5-5	

Spectr. Temp. ....61.°F..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....40R.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/80		3.34	K0II	R.C.	G12/.68	BS	IIaO-E	B	Sol Vel		Sl Str
2000/137		6.6	M2III	R.C.	G12/.68	BS	IIaO-E	A	Waterloo WVR	clouded in	Sl wk
							IIaO-E				
F/-	5.7						IIaO-E	B		blue Bike - Red OK	varies center ok
					10m D19		65°F	24, 186			

155

Date Tues. Wed. Sept 12-13 Observers BX-RI-BE

Emulsion Batches:
098-02-03038-01098
II a.o.F. - 03038 - 04098

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
			1950						
42851	NOVA CYG 1978	21h 40m 38s	+43° 48'	00 36	02 23	03 51 W	+43° 52'	Fe/NO#4	5-5-5
42851T	Spot Calibration for 42851+				15min @	15V 03 4810	7V 01 Hex	7V 02 5455	
42852	NOVA CYG 1978	21 40 38	+43 48	02 31	03 58	05 26 W	+43 54	Fe/NO#4	5-5-5
42852T	Spot Calibration for 42852-53				15min @	15V 04 3900	15V 03 4300	15V 02 4810	
42853	NO 16855	02h 37.1	+43 07	04 04	05 27	01 55 W	+43° 22'	Fe/NO4	5-5-5
42853F	focus test							Fe/—	5-5
Sept 15/78 Tested									
42853F2	Focus Test					0"	0° 0	Fe/—	25-25
F3								"	25-25
F4								"	25-25
F5								Fe/—	35-35
								Ne/—	35-35

Spectr. Temp.
Focus
Spectr. Temp
Exp. Mtr

Spectr. Temp. ..60°F..... Dome Temp./Hum. .....80% Transparency Conditions . clouds on & off.....

Focus .....50R..... good after 02:50 156

Spectr. Temp. ..53°F..... Dome Temp./Hum. .09°C...90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/800	3-5	6.3		R.C.	G16/.7	R.S.	098-02	B	NOVA	field dawn	fine
							098-02				
200/200	6"	6.3		R.C.	G12/.68	BS	IIIaJ+E	A	NOVA		fine
100/150	8"	6.7	A2	R.C	G12/.68	BS	IIIaJ+E	B			
								B	Temp 53°F	focus 50R	center of parts ck slit rotated??
		•								blue slit blue deviation	
					098 02e	5m	219	68°F	.31	1.77	
					IIaJ	8m			.19	1.75	
Temp	65°F	Set*	50R	RC	G12/.68	BS	IIIaJ-E	B	* original setting untouched from previous night		
Temp	65°F-	Set	20R	"	"	"	"	A		-27m? Cent for blue units?	
	"		"	"	"	"	"	B		-12m cent for blue (best focus)	
	"		"	"	G16/.78	RS	"	B		-14m? cent shift (sharp)	

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Date 6/17 Sept. '78 Sat/Sun Observers BJn - Tn

Emulsion Batches:
098-02-E 30038-13098 18 172
IIaO-E 30038-10088? 24 186

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42854F1	Focus Test			19h13m			+43 50	Ne/— Fe/—	30-30 15-15
42854	Nova Cygni 1978	(1950) 21 40.6	(1950) +43° 48m	19:19	0:11	1 55 W	+43° 57'	Ne - Fe/NDX4	3-8 8-8
42854T	Spot Calib for 42854				15min @	D3 1.5V 4810	D1 7V Hα	D2 7V 5450	
42855	Nova Cygni 1978	1950 21 40.6	1950 +43 48	00 21	01 55	3 39 W	+43 58	Fe/ND.4	5-5-5
42855T	Spot Calib For 42855				15min @ 15V	D4 3900	D3 4300	D2 4810	
42855F1	Focus Test					4 10 W	+43 58	Fe/—	5-5
42855F2	"					4 0 W	"	Fe/—	5-5
42856	HD 222368	23 34.8	+5 05	02:30	02:46	02 33 W	+5 33	Fe/-	5-3-8

Spectr. Temp
Focus
Spectr. Temp

Exp Mtr

Spectr. Temp. 64°F ..... Dome Temp./Hum. 56°F / 85% Transparency Conditions ..OK: Till 0h .....

Focus ..... 50R .....

Spectr. Temp. 55°F ..... Dome Temp./Hum. 49°F / 99% KK** Push Plate 158

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				R.C.	G16/.7	RS	098-02E	B	Temp 64°F Set 50R		ok
*200/313	6+	~6.5?	Nova	R.C.	G16/.7	RS	098-02E	B	Nova	*about 1hr with dexter ALL way down somewhere out of end	fine
							098-02E				
200/98	3-4"	~6.5?	Nova	RC	G12/.68	BS	DaO-E	B	Nova **	T12 max rise cloud Temp +56°F Set 65R	v. sl. wk.
							"		**		
				RC	G12/.68	BS	"	A	Temp 55.5°F	Set 65R	sl thin
				"	"	BS	"	B	Temp 55.5°F	Set 65R	
40/22	3"	4.64	F7IV	"	"	BS	"	B	5:1 Vol	Prop Fe in Stellar	exp v sl sl w
				098	4m	D19	67°				
				T120	10m		68°				

159 Just one B PH when you see A & B Focus tests first

Date 22/23 Sept '75 Eclipse Observers Rm-Glo / KK-DTS

Emulsion Batches:
5h 66° IIaO-E 30036 - 10028 18 161
5h 66° 098.04 30038 - 13098 30 176
5h 66° IIIaJe

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42857	HD 186688 = SV Cyg	19h 40.8	+29° 01.4	19h 36	21h 45	1h 50	+29 09	Fe NDx4	5-5-5
42857T	Spot Calibration for	42857 -			15 min			15V 04 3900 15V 03 4300 15V 02 4810	
42858	Nova Cyg	21h 40.8	43° 48	22:31				Fe NDx4	5- —
42859	Nova Cyg 78	21 40.6 1950!	+43° 48'	23:23	02:07			Ne	8-8-8
42859T	Spot Calibration for	42859 -			15 min			15V 03 4810 7V 01 Hx 1 02 5-150	
42860	HD 215182	22 38.3	+29 42	02:12	02:26	3h 35 W		Ne/clear	15-15-15
42861	HD 3712	0 34.8	+35 59	02:37	02:42	1 54		Fe/—	5-5-5
42862	HD 6582	1 01.6	+34 26	02:50	03:49			Fe/—	5-5-5
42863	HD 17105	6 31.9	+16 29	04 09	04:21	02h 24		Fe/—	5-5-5
42864	HD 17105	"	"	04:30	04:36	02 09		Fe/—	5-5-5
42865	Moon	5 23	+17 23	04.44	04:46	00:46 E		Fe/9y	5-5-5
42865T	Focus Test	±0	+17					Fe/—	5-5
F2	"	"	"					"	"
F3	"	"	"					"	"
14	"	"	"					"	"

Spectr. Temp. 60° Dome Temp./Hum. 43/80 (w/ thermometer?) Transparency Conditions ..prob. photometric.....

Focus .....55 R., 59 R.,..

Spectr. Temp. ....52°..... Dome Temp./Hum. ..48/..84..

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Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/140		6.8-7.7	Fo-G1	RC	G12/.68	BS	IIaO E	B	Capt/Evans		Fine
							IIaOE			last 4x5 plate in IIaO box used Focus = 59 R	
80/		8.0		RC	G12/.68	BS	IIaOE	B			Wk Exp-OK
600/160	4"	2.0	Nova	RC	G65/.5	RS	098 02e	B	Nova		Cont Lines H & K ST
							098-02e				
40/106		V=2.9	G51? + F7	RC	G24/.9	RS	IV-Nh	B	AsmSp/KK		exp. fine uneven fog s'sTr
40/21				RC	G12/.68	BS	IIaOe	B	2nd Vol		Fine
400/301		5.8	G5V$_p$	RC	G12/.68	BS	IIaOe	B	AsmSp/KK	Plate warped G1 image Tilt	VSl STr Fine
120/120		1.9	A0IV	KC	G8/.25B	BS	IIIaOe	B	Asm Sp/KK	poor focus	Sl STr
20/80		"	"	"	"	"	"	B	"		fine
20/20	3-5'		G0V	"	"	"	IIaOe	B	Std Vol		Fine
+7				"	"	"	"	B	4E	plate warped	
−4				"	"	"	"	A			
−1				"	G12/.68	"	"	B	"	T = 52°F F = 59 R	
−13				"	"	"	"	A			

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Date 23/24 Sept 78 Sat/Sun Observers Bts / Waterloo

Emulsion Batches: IIaOe 30038 – 23098 IR 175

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42866	HD 187691	$19^h 46.2^m$	$+10° 10'$	$23^h 18^m$	00.02^m	$04^h 06^m$		Fe ND4	5-5-5
42867	Prob HD 218918	$23^h 06.7^m$	$+8° 11$	$01^h 04^m$	$0.1^h 45^m$	$02^h 31^m$	$+08° 32'$	Fe ND4	5-5-5
42867T	Spot Calibration fs		42866-67		15 min	15V 04 3900	15V D3 4300	15V D2 4810	
Sun Sept 24th Tq									
42867F1	Focus Test		Dome Temp +61°F also			0h	+25°	Fe/—	25-25
67F2	"					"	"	Fe/—	25-25

Spectr. Temp. 56° ..... Dome Temp./Hum. 41°/91% . Transparency Conditions ... clear .....

Focus ..... 59R .....

Spectr. Temp. 56° ..... Dome Temp./Hum. 41°/93% 162

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100/100	4"	5.6	F8V	RC	G12/68	BS	IIaOe	B	W.V. Bin. Waterloo		Fine
~~200~~/141	3"	5.1	*A2V	RC	G12/68	BS	IIaOe	B	~~Waterloo~~ W.V. Bin. Mistake	* Early Type, not M. Exp. but wrong	Fine
										water condensing on dome closed up at 02h00m	
Temp +61°F			Set 60R	RC	G12/68B	BS	IIIa-e	A			
	"		60R	"	"	BS	"	B	-1R		
		IIaOs		8 min	@ 68°F	D19	In		Sept 24		

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Sun Mon

Date 24/25 Sept 78 Observers Roth - Tu - Gris

4m 68° Emulsion Batches:
7¼ 69° 078-02E 30038 23098 15 10
IIaO-E 30038 23098 18 16

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42868	Nova Cyg '78	1950 21 40.6	1950 +43° 48'	19h 45m	20 39	01 05E	+43° 55.3	Neu/clear	11-8
42868T	Spot Calibration for 42868			15 min.		15V D3 4810	7V D1 Hα	7V D2 5450	
42869	Nova Cyg '78	1950 21 40.6	1950 +43° 48'	20h 48m	21 05	00 35E	+43° 55' 3	Neu/clear	8-8
42870	HDE 226868 = Cyg X-1	19 54.6	+34° 56'	21h 27m	01 23	05 23W	+35° 08'.7	Fe/ND×4	5-5-5
42870T	Spot Calibration for 42870			15 min.		15V D4 3780	15V D3 4300	15V D2 4810	
42871	HD209975 = 19 Cephei	22 02.1	+61° 48'	01 33	01h 52m	03 45W		Fe/ND×2	5-5-5
42872	HD9071	01h 24m.2	+22° 18'	02h 13m	0509	03 38W	+22 44	Fe/ND×1	8-8
42873	HD12929	02 01.5	+22 59	05 12	05 17	03 09W		"	8-8
42873X	HD 29139	04 30.2	+16 18	05 22	0525	0 47W		"	12-12
42873XF	Focus Test					0h	+17°	Fe/—	12-12

Spectr. Temp. 61°F ..... Dome Temp./Hum. 60°/79% Transparency Conditions Hazy. Photometric.....

Focus ... 60R .....

Spectr. Temp. 55°F ..... Dome Temp./Hum. 49°F/95% s/ aurora by 2^h gusty too

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Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100/90	1-2"	8	Nova	RC	G65/15	RS	098-02e	B	Nova	no filter?	Ha str cont v wk
							098-02e				
100/30	1-2"	8	Nova	RC	G65/15	RS	098-02e	B	Nova		Ha str cont wk
100/125	2-3	9.14	09.7Ia0	RC	G12/.68	BS	IIaO-E	B	Sp. Std. - Ecl.	Image s/ obstructed by vis. Engrave Prism for 1+2 hrs ?? maybe	v wk
							"				
200/120		5.1	09.5Ia	RC	G121/.68	BS	IIaO-E	B	Sp. Std.	58°F	s/ str
300/250	3"	6.75	A2V/A4V	RC	G8/-.25	BS	IIaO-e	B	Ecl Bin. - B/a		v s/ str
90/36	2"	3.15	K2III	RC	"	"	"	B	std Vel	plate chipped	fine
90/33	1-2"	23	K5III	"	"	"	"	B	"		fine
Temp 55°F Set 60R				"	"	"	"	B	" 31R		v. s/. red

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Date 25/26 Nov/Sept 78 Observers ...Bts-Tn-But....

8" 68.5 Emulsion Batches:
IIaOe...30038-23098 24 17
4½" 68.5 .098.02e.30038-24098 18 19
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
42875	Nova Cyg '78	1950 21 40.6	1950 +43° 48'	18h 51m	1935	-02 06E	+43° 42.9'	Fe/ND×4 Ne/	8-13-4 6-8-2
42875T	Spot Calibration for		42875-		15 min	15V 03 4810	7V 01 Hα	7V 02 5450	
42876	HD 156547	17 13.1	+26 00	19h 45m	2236	0518W	+25°51.6m	Fe/ND×4	5-5-5
42876T	Spot Calibration for		42876-78.		15min	15V 04 3900	15V 03 4300	15V 02 4810	
42877	HD 217675	22h 57.4m	+47° 24'	22h 45m	0218	0319W	+47 46	Fe/	5-5-5
42878	HD 18337	02h 51.7m	+59° 11'	02h 27m	0539	0243W	+59° 25'	Fe/ND 4	5-5-
42878F	Focus Test							Fe/—	-12

Spectr. Temp. 56°F Dome Temp./Hum. 50°F/77% Transparency Conditions Very good

Focus 70-R → 90R

Spectr. Temp. 45°F Dome Temp./Hum. 39°F/77%

VERY GOOD AURORA 166

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/91	2"	≈2	Nova	RC	G16/.7	RS	098	B	Nova.	Exp now 1:1+2	Hα sl str no cont
							"				
00/274		7.04	A1	RC	G12/.68	BS	IIaO-e	B	Am MR	Exp now 1:1+2	fine
-/300	3"	7.50	A0	RC	G12/.68	BS	IIaO-e	B	Am MR	Focus → 90R Temp 50°F	v sl str
00/229		7.85	A0	RC	G12/.68	BS	IIaOe	B			fine
Temp-45F		Set-90R		RC	G12/.68	BS	IIaOe	B			61 6 line ** emiss

Date 28/29 SEPT A. D. 1896/Fri Observers Fyi-Ri-Bts

Emulsion Batches:

fresh D-19 { 5m 68° 09802e 30038-24098 26 216
8m 68° IIaOe 30038-26098 20 176

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
42879	HD 161096 (β Oph)	17h 38.5	+4° 37	18h 50	18 59	+01h 28W	+4° 33.4	Fe/NDx4	5-5-5	40/80
42880	HD 163506 (59 HER)	17h 51.4	+26° 04	19h 03	19h 49	+02h 05W	+26° 02	Fe/NDx4	5-5-5	200/200
42880T	Spot Calibration for 42879-80				15min @	15V 04 3900	15V 02 4810	15V 03 4300	15V 02 4810	
42881	NOVA CYGNI	21h 40.6 (1900)	+43° 48 (1900)	20h 10	24h 10m	00h 18E	+43° 53	Fe/NDx4 Ne/—	8-8-8 8-8-8	800/400
42882	HD 219113	23h 08.3	+02° 08	21h 18	01h 31	02h 32W	+02° 31	Fe/NDx4 Ne/—	8-8-8 8-8-8	700/700
42882T	Spot Cal'b plate for 42881				15 min @	15V 03 4810	7V 01 H2	7V 02 5450		
42883	HD 12929	02h 01.5	+22° 59	01h 38	01h 42	0h 11E	+23° 19.5	Fe/NDx4 Ne/—	8-8-8 8-8-8	40/80
42884	HD 13480 A	02h 6.6	+29° 50	0h 47	02h 25	0h 27W	+30° 10	Fe/NDx4 Ne/—	8-8-8 8-8-8	300/350
42885	HD 22468	03h 31.6	+0° 16	02h 35	04h 24	1h 02W	+0° 29.3	Fe/NDx4 Ne/—	8-8-8 8-8-8	200/350
42885T	from test							Fe/—	10-10	

Spectr. Temp. 53°F ..... Dome Temp./Hum. 51°F/74% Transparency Conditions ..... 168..

Focus ... 66 R .....

Spectr. Temp. ... 50°F ..... Dome Temp./Hum. 45°F/95%.

Aurora second half

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50		3.93	K2 III	~~GTT~~ BC	G12/1.68	BS	IIaD-c	B	STD VEL	BROKEN 2 pieces	sl str
200/200		5.82	F2 Ia	BC	G12/1.68	BS	IIaD-e	B	CEPHEID/EVANS		sl str
		~~8~~	~~IV~~								ok
100/140		~8	N:n	EC	G16/1.70	RS	098-02-e	B	NOVA		cont wk Hd str
700/700		V= 7.3	G5	Rc	G16/1.70	RS	"	B	RS CVn/Fgi		fine
40/80		3.15	K2 III	Rc	G16/1.70	RS	098-02-e	B	Std Vel		strong
300/350		4.95	G5 III	RC	G16/1.70	RS	098-02-e	B	RS CVn/Fgi		strong
200/390		V6.01	G0 V	Rc	G16/1.70	RS	098-02-e	B	RS CVn/Fgi	CLOUDS	sl str

Date 1978 Oct 1/2 Observers KK - Ri - Bts

Emulsion Batches:
5m 12° 4 4 J 32 192
5m 58° 098.02 30099 - 29598 30 189

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42886	HD 159561	17 30.3	+12 38	18h47m	19h50	01h50W	+12 35	Fe/—	7-77
42887	HD 159561	15 41.7	+57 27	19:18	22:18	04h00W	+59°35	Fe/—	4-4 5-5
42[illegible]71	spectral			15min	17.5U D4 39 D		15U D4 +13 D	15U D4 42 D	
42888	HD 215182	22 38.3	+29 42	~~23h28m~~			+30 06		
42887[illegible]	spectral			15min	15U D3 48 D	90 Hd	70 H2 54 D		
42887[illegible]	~~focus~~							Fe/—	30-3 ~~48-7~~

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr.

Spectr. Temp. 59° Dome Temp./Hum. 56°F/91% Transparency Conditions scattered cloud

Focus 59R 170

Spectr. Temp. ..... Dome Temp./Hum. 20°F/100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/80	5"	2.2	AS III	RC	G12/.68	BS	IIIaJe	B	AsmSp/KK		fog high S/str
200/133	3"	V= 2.7	dM6	RC	G85/.5	RS	098-2e	B	"	V filter	w/ + flexure
							098-2e				
100/		V= 2.9	S6 III + C7	RC	G12/.9	RS	IIIaJ+N	B	"	Clouds & dew	
							098-2e				v s/ red
					59RY -		56°F	B			

Comparison Type Filter Exp.

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Date Mon/Tues Oct 2/3 72 Observers Bts - Ri - But

Emulsion Batches:

8" 68° IIaOe 30038 - 26098 20177

5" 098 02e 30038 - 29098 ~~33-198~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42888	HD 150 [illegible]	17 13	+26 00	18 34	20 19	03 30W	+25° 51'	Fe/ND [illegible]	5-5-5
42 888T	spot calibration	for	42888 -		15min @	15V D4 3900	15 D8 4300	16V D2 4810	
42889	HD 202313	21h 09.9	+30° 33'	20h 24m	23 05	02 19W	+30° 40'	Fe/ND [illegible]	5-5-5
42890	HD 217695	22h 57.1	+47° 21	23 08	03 12	04 39W	+47° 48	Fe/ND [illegible]	5-5-5
42891	HD 16855	02h 37	+43° 07	03: 18	04 35	02 21W	+43° 23	Fe/ND [illegible]	5-5
42891 F	focus test							Fe/ —	12 12

Spectr. Temp. 5

Focus 5

Spectr. Temp.

Exp. Mtr Sec

Spectr. Temp. 57° ..... Dome Temp./Hum. 56°F/86% Transparency Conditions HAZE, THIN CLOUD .....

Focus 56R .....

Spectr. Temp. 56°F ..... Dome Temp./Hum. 46°F/10%

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Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/300	1-	7.34	A1	P.C.	G12/68	BS	IIaOe	B	Am MR		
							IIaO-E			pl. no. written on spots	
400/300	2"	7.56	B9	R.C.	G12/.68	BS	IIaO-E	B	Ap-MR		
400/250		7.50	A0	R.C.	G12/.68	BS	IIaO-E	B	Ap MR	CLOUDS	
400/246		6.7	A2	R.C.	G12/68	BS	IIaO-E	B	Am-MR	CLOUD AGAIN	
							IIaO-E	B			

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Date ..... Observers .....

Emulsion Batches:

8m 68° IIaO-E 26096-29036 21 179
5m 68° 09[illegible] 29096 [illegible] 25 175
5m 67° IV-N 13127

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1A	186688	19h 40.8	+[illegible]9	[illegible]	20h 47	01h 37W	+	Fe/	5
42891T	Spot Calib for 42891		-92,97		15min @ 15V	D4 3900	D3 4300	D2 4810	
42892	HD 227361 = 1 Sec	23h 34.x	+5° 05	20h 56	21h 04	01h 58E	05° 31	Fe/	5-5-5
42893	"	"	"	21h 14	21h 27	01h 35E	0° 31	Fe/ Ne/—	8-8 8-8
42894	HD 210334 = HR 8[illegible]	22h 04.6	+45° 15	21h 35	23 [illegible]	01, 36N	+45 31	Fe/ Ne/—	5-5 5-5
42895	HD 216899 = HR 8[illegible]	22h 49.1	+16° 19	23h 13	0h 20	02 04 W	+16° 45	Fe/ Ne/—	[illegible]
42895T	Spot Calib for 42893 — 95,				15min @	15V D4 4810	7V D1 Hα	7V D2 4550	
42895F	Focus Test						Hγ F-28 Fe1-15	(Fe/— 10sec)	
42896	HD 215[illegible]	22 383	+24 42	00 34	00 48	2 43 W	+30 08	Ne/—	15-15
42896F	Focus Test					3h W	"	Fe/—	15-15
42897	HD 217782	[illegible]	[illegible]	01 04	01 24	3 58 W	+42 40	Fe/	5-5-5
42898	—	—	—	01 38	—	W	+	"	5
42897F1	Focus Test							Fe/—	7-7
42897F2	Focus Test							Fe/—	7-7

Spectr. Temp. ..56°F..... Dome Temp./Hum. 55°F / 90% Transparency Conditions ..sl. Hazy.....

Focus .....6.0.R.....

Spectr. Temp. ..55°F..... Dome Temp./Hum 50°F / 100%

174

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
/149	1"			RC		BS	IIaOE	B			v sl stm
							"				ok
40/30	1"	4.6	FTV	RC	G13/.68	BS	IIaOE	B	SH vel		v sl stm
40/65	1"	"	"	RC	G10/.70	RS	098E	B	"	no data	v sl stm
200/400	1"	7.3	G5	RC	G14/.70	RS	098E	B	RS CK/Fei		fine
60/314	1"	6.7	gK1	RC	G10/.70	RS	098E	B	RS CK/Fei	no data	fine
							"			4810 sl. stm D3 should be used	
				RC	G16/.70	RS	"	B	Set 60R Temp 55°F	* white V Filter no data	
40/100		3.8	G80 2, + F2,	RC	G9/1.9	RS	TV-Nh	B			v l stm
				RC	G12/.68	Slit 70M	[illegible]	B	Set 60R Temp 55°F	13R	sl stm
200/105	1"	5.2	A2	RC	G12/.68	BS	IIaOE	B			fine
200/				"	"	"	"	B		[illegible]	
				RC	G12/.68	BS	IIaOE	B	Set 60R Temp 55°F		v sl blue
				"	"	"	"	A	"	"	blue

175

Date Sun./Mon. Oct 8/9 Observers Rm-Tn

Emulsion Batches: IIa0-e 05108-30038

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42898F	Focus TEST							Fe/—	7-7
42898	HD 163506=BY Her	17h 57.4	+26° 4	18h 40	19h 34	2h 31 W	+26° 09	Fe/ND.4	5-5-5
42899	HD 166622=SU Her	18h 02.8	+27° 01	19h 38	20h 55	2 03 W	+29 13	Fe/ND.4	5-5-5
42899T	Spot Calib				15min @	15V 3400 D3	4300 D2	4810 D1	
42899F1	Focus Test 3 (Target	Δ Set/cent disp) for sure			1st exp. mix			Fe/—	25-25
42899F2	"							Fe/—	25-25

Spectr. Temp. ....43°F..... Dome Temp./Hum. +41°F / 84% Transparency Conditions .....

Focus ....F5R.....

Spectr. Temp. ..... Dome Temp./Hum. +35° / 99%

135R For 40.5°F

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/.68	BS	IIaOE	B	45° Temp 60 to 5R	cent + Blue	
200/130	3"	5.32	F2Ia	RC	G12/.68	BS	IIaOE	B	Cyd/Eum		Fine
200/182	3-5"	5-7.7	F0-G1	RC	G12/.65	BS	IIaOE	B	Cyd/Eum	somewhat bad	Fine
I guess I used wrong Diaphrams (Unless light just was wrong)									(yes ALL Ds are wrong)		
				RC	G12/68	BS	IIIaJ	B	Set to 130R Temp 40.5°F		
				"	"	BS	"	B	Set to 80R	Temp 40.5°F	

177

Date Mon-Tues Oct 9-10 Observers Tu-Kai

Emulsion Batches: Hν0-e 02105 - 30038

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42900F1	Focus Test	To determine	Δset cent disp Ratio			0	+30	Fe/—	20-2
F2	Focus Test					0	"	Fe/—	20-2
43900	Moon			17:27	18:31	13m E		Fe/ND4	7-7
42901	Moon			18:35	18:37	7m E		"	7-7
42902	p CrB HD 143761	15 57' 13"	+33°36	18:45	19:42	1 37 W	+33 19	"	7-7
							D4	D3	D2
42903 T	Spot Calib for 42900-02				15 min @ 15V		3900	4300	4810

Spectr. Temp. 42°F ..... Dome Temp./Hum. 50°F / 71% Transparency Conditions . Cloudy ... Hazy.

Focus ... was 80R .....

Spectr. Temp. ..... Dome Temp./Hum. 48 / 86% 2 PM to 49°F 1 PM

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G1 [illegible]	BS	[illegible]	B	Set 105R	[illegible]	[illegible]
				"	"	BS	"	B	Set 55R		[illegible]
30/14	—			RC	G2/188	BS	IIaO	B	Solar	Set 90R (2 sec to 5 sec)	Fine some fr
30/14				"	"	"	"	B	Program		Fine
20s/31*	1"	6.0	G2II	"	"	"	"	B	Unexposed cal shoot	[illegible]	slight *
	Oct 8-9's	Oct 9-10	Pluto	Dev D19	8min @	67.5°F		Oct 9			

Comparison Type Filter Exp

179

Emulsion Batches: 8" 68°F IIaO-e 05109 — 19F

Date Tues. Wed. Oct 10-11/78 Observers T.y.-Kai-. John (new student)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42903	Moon			18 14	18 16				
42904	HD 143761 pCrB	15 57.2	+33 36	18 31	1917	4 16 W			
42904T	Spot Calib	for 42903-09			15 min @ 15V 39a	D4	D3	D2	
42905	~~HD 191854~~	20 06.9	+43 39	19 27	1937	W			
42905	HD 191854	20 06.9	+43 39	1940	2139	2 29 W	+43 51		
42906	HR 72 HD 1461	0h 13.5	-8°36	2149	23 18	0 00	-8 11	"	5-5-5
42907	9 Ceti HD 1835	0 17.7	-12°46	23 22	00 45	1 24 W	-12 21	"	5-5-5
42908	HR 449 HD 9732	1 28.7	-7°32	0055	0145	1 12 W	-709	"	5-10
42909	HD 26736 Hyade	4 08.6	+23 20	0157	0502	1 49 W	+2329	"	5-5-5

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr Sec

Spectr. Temp. 60°F Dome Temp./Hum. 60°F / 80% Transparency Conditions V. good

Focus 50R

Spectr. Temp. 56°F Dome Temp./Hum. 50°F / 100%

180

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/14				RC	G12/688	BS	IIa-e	B	Solar-Kaplan		Fine
200/120	<1"	6.0	G2V	"	"	"	"	B	"		focus? Fine
							"				
100/3	=1"	7.9	G5				"			Aborted - Viewing Stn.	
200/40	<1"	7.9	G5	RC	G12/688	BS	"	B	"	Hi-cloud	Fe sl wk Ti p
100/250	2"	7.1	G0	"	"	"	"	B	"		He sl wk vsl wk
100/250	1"	7.2	G2	"	"	"	"	B	"	Poor Spec in some of the wavelengths	Fine
250/130	<1"	6.4	G2	"	"	"		B		58°F *	Fine
200/202	<1"	8.75	G3V	"			"	B	"	getting foggy *	Fe wk Si wk
										(* Both Aborted = 4	
										Weather and prob 42709)	

181

Date Wed/Thurs Oct 11/12 '78 Observers Tim: Kim: Dominique

8m 69°F

Emulsion Batches:
IIaOe 05108.30078
IIaOs* new batch
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42910	r Her HR6136	17 54.7	+30 02	1824	1840	1 49 W	+30	Fe/11+	5-10
42910T	Spot Cal in for <42910-11.				15 min @ 1½V	P4 3900	D3 4300	D2 4810	
42911	K Del HD196755	20 34.3	+9 44	1854	1927	07°E	+10 00	Fe/11+4	5-10
42911F1	Focus Test							Fe/—	5-5
42911F2	" "							Fe/—	5-5

Spectr. Temp. 58°F ..... Dome Temp./Hum. 60°F / 50% Transparency Conditions Hazy ... Cirrus .....

Focus ... 50R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

182

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1-110	4"	4.7	F2	RC	612/688	IS	IIa-D	B	Saturn 1a/2a	T3/Focus problem with focus?	V.S.B.
							"				
200/24	3"	5.75	G5	RC	612/688	"	"	B	"	Overlaid on t-Cyg	V.S.B.
				"	"	BS	IIaO*	B	set 50R Temp 575°F		V.S.Blue
				"	"	70μ	"	B	"	" 2R	red

183

Date 15/16 Oct 1978 Observers KK/Tn

Emulsion Batches:
IIIaJ.c

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4291IF3	Focus Test					0^h	$+25^\circ$	Fe/—	20-20
F4	"					"	"	"	"
F5	"			19^h		"	"	"	"
F6	"					"	"	Fe/—	"
T1	Exp test & Line quality test (comp & stellar)					"	"	Fe/He/Hg	5-5

Spectr. Temp. +44.5→45°F Dome Temp./Hum. +43°F/84% Transparency Conditions . clouds

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

184

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	mean focus	Remarks	Quality
	+45°F	Set +115R		RC	G12/168	BS	IIIaJ-E	B	Tight Fit	76R		
"	"	"		"	"	"	"	C	Tight Fit	152R	wk stellar?	
"	"	"		"	"	"	"	A	norm Fit	133R	"	
"		Set 85R		"	"	70μ	"	B		33R		
				"	"	70μ	IIaO-E	B			ST - comp = -2μ	

185

Mon Tues

Date . Oct. 16-17/1978. Observers . But-Tu-(John Reid)

Emulsion Batches:

8½" 67° . IIa-O . 30038 - 10108

4½" 67° . IIaF . . . . . .

. . . . . .

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mir	Seen
42912	HD156547	17 13.1	+26 00	18 19	20 15	+04 21 W	+25 57	Fe/no-4	6-6-6	40/251	
42912T	Spot Calib for 42912-16				15 min @ 15V	04 3900	D3 4300	D2 +810			
42913	HD 208835	21 53.9	+41 53	20 20	22 48	+02 15 W	+46 47	Fe/no-4	6-6-6	40/253	
42914	HD 217695	22 57.4	+47 24	22 53	0055	3 17 W	+4751	"	6-6-6	40/250	
42915	HD 18337	02 51.7	+59 11	01 00	0337	0303 W	+5930	"	6-6-6	40/250	
42916	HD 34547	05 13.2	+13 29	03 43	05 59	0206W	+1334	"	6-6-6	40/253	
42916F	Focus Test					0h	"	Fe/—	19-19		
F2	"							Fe/—	20-20	41°F	
F3	Focus test after raising BS 3 turns = 1.15 mm, secondary ½ turn							Fe/—	20-20		
F4	Focus test, slit							Fe/—	20-20	"	

Spectr. Temp.

Focus . . . 110

Spectr. Temp.

Spectr. Temp. 493°F (inside 40°F) Dome Temp./Hum. 45°F / 58% Transparency Conditions Excellent

Focus 110R

Spectr. Temp. 436.5°F Dome Temp./Hum. 32°F / 80%

186

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300/251	2-4	7.04	A1	RC	G121.68	BS	IIaO-e	B	Am MR		sl str
							"				
300/253	3	7.39	A0	RC	G121.68	BS	"	B	Ap MR	broken 2pc saved	sl str
300/250	2-4	7.50	A0	"	"	"	"	B	"		sl str
300/250	2-3	7.55	A0	"	"	"	"	B	Am MR	Temp 39°F Set 120R	v sl str
300/219	"	7.5	B9	"	"	"	"	B	Ap MR		v sl str
				"	"	"	IIIaJ	B	set 120R Temp 36.5°F		ok
40°F	Set	110R			"	BS	IIaF	B	focus		stellar
"		"				BS	"	"	"		ok
"		"				70μ	"	"	"		ok2
It looks as if changes were made without											
significant change from previous curve											

187

Tues-Wed

Date ..Oct.17-18./.1976... Observers ..B.U.T.-Tm...f. Dominique

8m D19 68m

Emulsion Batches:
IIaO-e 30038 - 10108 20 181
IIaO-e* 30038 - 16108

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42917	HD 186791	19 41.5	+10 22	1906	1921	0104 W	+10 36	Fe/ND×4	8-8
42917F	Focus Test					"	"	Fe/—	18-18
42918	HD 186791	19 41.5	+10 22	1937	1945	0128 W	+10 36	FE/ND×4	8-8
42919	HD 222207	23 33.5	+41 57	1954	2200	0010 E	+42 26	"	6-6
42919T	Spot coll. for 42917-19				15 min @	15V D4 3900	D3 4300	D2 481D	
42919F	Focus Test							Fe/—	18-18
42920	HD 18337	02 51.7	+59 11	0150	0222	0 52W	+59 31	FE/ND×4	6-12

Spectr. Temp. 43°F ..... Dome Temp./Hum. 43°F / 80% Transparency Conditions Cruddy .....

Focus .... 110R .....

Spectr. Temp. ..... Dome Temp./Hum. 38°F / 95% 188

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/28	1-2"	4.15	K3II	RC	G12/1.68	70u	IIIaJ-e	B	std vel	#3 Exp meter filter posn	exp fine
	43°F	Set 110R		"	"	BS	IIIaJ-e	B			sl red
10/25	1"	"	"	"	"	BS	IIaOE	B	std vel	#2 Exp meter posn	fine
600/250	<1"	6.11	B9	RC	G12/1.68	BS	IIaOE	B	A_p MR	cloud half time	sl str
							"				
Temp +41°F		Set 110R		RC	G12/68	BS	IIIaJ	B	After adjustments		sl red
600/36	1-2"	7.85	A0	RC	G12/1.68	BS	IIaOE*	B	A_m MR	cloud	wk
									Call this an Exp test. Comment if this one turns out "sl wk"		
				RS & BS alignment tests							

Note - Older [illegible] box in Vac box 2 with [illegible]
These [illegible] OK if last Form [illegible]

189

Date Oct 19/20 1918. Observers KK - BTS

Emulsion Batches:

4m 60 IIaF
IIIaJ 31058-17168

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
A2920F1	focus test							Fe/—	20-20
F2								"	"
F3								"	"
F4								"	"

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec

Spectr. Temp. 46°F Dome Temp./Hum. ..... Transparency Conditions ... clouds

Focus ... 110 R ... 190

Spectr. Temp. ..... Dome Temp./Hum. 44° / 98%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC G16	G16/.7	RS	IIIaF	A	TEST		useless
				RC	G12/.68	BS	IIIaJ	A	"		blue
				"	"	70μ	IIIaJ	A	"		bl blue
				"	G16B'/.68	70μ	IIIaJ	A	"	"neo" G16B 57R	blue

191

Date Oct 20/21 1978 Fri/Sat Observers Ly - BTS - KK 5" D19, 67°F

Emulsion Batches: 098-02 30038-20.10.8 17 126
098-02+ 30038-21.10.8 (3hr + van) 17 150

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42921F1	focus test							Ne/—	20-20
42921	HD 201091	21 2.4	+38 15	19:19	19:30	00 03 W	+38 38	Fe/ND Ne/—	4-4-4 5-5-5
42922	HD219113	23 08.3	+02 08	19:57	20:28	01 04 E	+02 32	Fe/ND Ne/-	4-4-4 5-5-4
42923	HD219113	23 08.5	+02.08	20:34	21:02	00 31 E	+02 30	Fe/ND Ne/-	4-4-4 4-4-4
42924	HD219113	"	"	21:07	21:42	00 10 W	"	Fe/ND Ne/-	4-4-4 5-5-5
42925	HD219113	"	"	21 46	22:17	00 44 W	"	Fe/ND Ne/-	4-4-4 5-5-5
42926	HD219113	"	"	2223	23:00	01 26 W	"	Fe/ND Ne/-	4-4-4 5-5-5
42926T	calibration plate	for 42921-4292	8 15min@			15V D3 4810	7V D1 Hα	7V D2 5450	
42927	HD219113	23 08.3	102.08	23:07	23:46	02 10 W	02 33	Fe/ND Ne/-	4-4-4 5-5-5
42928	HD219113	"	"	23:51	00:36	03 04 W	"	Fe/ND Ne/-	4-4-4 5-5-5
42929	HD219113	"	"	00:42	01:23	03 57 W	"	Fe/ND Ne/-	4-4-4 5-5-5
42929T	calibration plate	for 42929—	15min@			15V D3 4810	7V D1 Hα	7V D2 5450	
42929F1	focus test							Ne/—	20-20
42929F2	focus test							Ne/—	10-10
42930	HD22468	03 21.6	00 16	01:58	03:35	01 40 W	00 31	Fe/ND Ne/—	8-8-8 8-8-8

Spectr. Temp.
Focus 13
Spectr. Temp.
Exp. Mtr | Sec

Spectr. Temp. 52°F ..... Dome Temp./Hum. 50°F / 93% ..... Transparency Conditions ... photometric .....

Focus ..... 130 R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

192

A220F Tour - Percy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G65/.5	V filter + RS	Offset	A	test	set 110R, reset 130R	
500/80		V=5.2	K5V	"	"	"	"	"	Std Vel	61 Cyg A	fine dust
500/110	2"	7.0	G5	"	"	"	"	"	RSCvn - FQT		* v sl wk dust
500/111		9.0	G5	"	"	V filter + RS	Offset	A	"		
500/114		"	"	"	"	"	"	C	"	forgot to put dark slide back in when removed	black
500/115		"	"	"	"	"	"	A	"		
500/110		"	"	"	"	"	"	C	"		
500/110		"	"	"	"	"	"	A	"		
500/115		"	"	"	"	"	"	C	"		
500/96	2-3	"	"	"	"	"	098 02E *	A	"		
										should be 109R	
				RC	G65/.5	V filter + RS	098 02E *	C	test	T = 50°F	v sl blue
				RC	G16/.70	RS	098 02E	A	test	Broken plate — from C. Focus changed +.12 R	v sl red
500/350	2	6.62	G5V	"	"	"	" *	C	RSCvn - RQC		* fine

193

Date Oct 20/21 1928 CONTD Observers Ly-Bats

Emulsion Batches: 098.02C 30088 21008

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42931	HD65626	07 54 5	+57 33	03 54	05 57	00D 22E	+57 19	Fe/NO	8-8-8
								He/-	8-8--
42932	HD47105	06 31.9	+16 29	06 09	06 13	01 18W	+16 24	Fe/ND	8-8-8
								He/-	8-8--

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... first strike .....

Focus .....

Spectr. Temp. ....48°F..... Dome Temp./Hum. ..37/100 57/10

194

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
90/341		7.1	GO	RC	G16/70	RS	098-02	A	RSCVn-PRI		
10/80		1.9	HO	"	"	"	"	B	Asm - KK		dust? sl sm
	→	use brush to clean RS field lens & beam splitter in RC.							←		

195

Date Oct 21/07 1978 SAT/SUN Observers Ly - BTS

Emulsion Batches:

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Spectr. Temp.

Focus 10

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
~~42933~~	HD219113	~~23 08.3~~	~~+02 08~~	~~21h25m~~			02 33	Fe/ND He/-	4- 5-	8	

Spectr. Temp. 60°F Dome Temp./Hum. 45°F./76% Transparency Conditions less. Partly cloud

Focus 108R

Spectr. Temp. Dome Temp./Hum.

Sat tours ~160 visitors 196
Partly cloudy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/		9.0	95	RC	565/5	RS	098 07e	A	RSCh · FQJ	ABORTED 22 30 25 counts	

197

1974

Date 23/24 Oct. Mon/Tues Observers FQI - BTS

4½ 68°

Emulsion Batches: 098-02-E 30038 - 21.108 22 182

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42933	HD 219113	23h 08.3	+2° 08	18:22	19:50	1h 30E	+2° 33.8	Fe/ND Ne/—	4-4-4 5-5-5
42933T	calibration plate for 42933-38				5mn@	15V D3 4810	7V D1 Hz	2V D2 5450	
42934	HD 219113	23h 08.3	+2° 08	19:54	21:07	0h 14E	+2° 33.5	Fe/ND Ne/—	4 4 4 5 5 5
42935	HD 219113	23h 08.3	+2° 08	21:11	22:22	1h 00W	+2° 33.4	Fe/ND Ne/—	4-4-4 5-5-5
42936	HD 219113	23h 08.3	+2° 08	22 25	23:29	2h 07W	+2° 33.5	Fe/ND Ne/—	4-4 4 5- 5
42937	HD 219113	23h 08 3	+2° 08	23:45	1:06	3h 44W	+2° 33.7	Fe/ND Ne/—	4-5 5 5 5
42938	HD 13480A	2h 06.6	+29° 50	01:20	02:33	2h 14W	+30° 11.9	Fe/ND Ne/—	8-8 8 8 8 8
~~42939~~	~~HD 13480A~~	~~2h 06.6~~	~~+29° 50~~	~~02 35~~		W	~~+30° 12.5~~	Fe/ND Ne/—	8 8

Spectr. Temp.
Focus 14
Spectr. Temp.

Exp. Mir Seeing

800/120 5-5
800/120
800/120
800/115
800/120

Spectr. Temp. 49°F Dome Temp./Hum. 40F/22% Transparency Conditions CLEAR
THIN CLOUD AFTER MIDNIGHT

Focus 142 R

Spectr. Temp. 37°F Dome Temp./Hum. 1°C/91%

198

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600/120	5-6"	V = 7.3	G5	RC	G65/1.5	Vfilter +RS	098-02-e	A	RS CVn		* fma
							098-02-e				
600/120		V = 7.3	G5	RC	G65/1.5	Vfilter +RS	098-02-e	C	RS CVn		* fma
600/120		V = 7.3	G5	RC	G65/1.5	V filter +RS	098-02-e	A	RS CVn	RELOADED F: MISSED 2ND Fe Arc EXP. ✓	
600/120		V = 7.3	G5	RC	G65/1.5	Vfilter +RS	098-02-e	C	RS CVn		fma
600/115		V = 7.3	G5	RC	G65/1.5	Vfilter +RS	098-02-e	A	RS CVn	thin cloud	ac on star
600/722		V = 4.95	G5III	RC	G16/1.70	RS	098-02-e	C	RS CVn	thin cloud	
600/		V = 4.95	G5III	RC	G16/1.70	RS	098-02-e	A	RS CVn	CLOUDS.	

No focus plate?

* dust? on #1 plate

199

Date 24/25 OCT 1978 TUES/WED Observers Fqi - Bts

Emulsion Batches: 4½ᵐ 68ᵉ 098026 ... 30038 - 23108 ... 17, 183

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. / Focus / Spectr. Temp. Exp. Mtr	Sec
42939	HD 222107	23ʰ 32.7	+45° 55	20ʰ 36	20ʰ 49	0ʰ 53 E	+46° 19	Fe/ND Ne/—	8-8-8 8-8-8	40/70	
42940	HD 222107	23ʰ 32.7	+45° 55	20ʰ 50	21ʰ 02	0ʰ 39 E	+46° 19	Fe/ND Ne/—	8-8-8 8-8-8	40/70	
42941	HD 3712	00ʰ 34.8	+55° 59	21ʰ 10	21ʰ 15	1ʰ 30 E	+56° 22.6	Fe/ND Ne/—	8-8-8 8-8-8	80/70	
42942	HD 4502	00ʰ 42.0	+23° 43	21ʰ 23	21ʰ 49	1ʰ 01 E	+24° 07	Fe/ND Ne/—	8-8-8 8-8-8	120/200	
42943	HD 4502	00ʰ 42.0	+23° 43	21ʰ 51	22ʰ 09	0ʰ 42 E	+24° 07	Fe/ND Ne/—	8-8-8 8-8-8	100/240	
42944T	calibration plate for 42939 —				15mn @	15V 03 4810	7V 01 tic	7V 02 5450			
42944	HD 219113	23ʰ 08.3	+02° 08	22ʰ 30	22ʰ 52	1ʰ 35 W	+02° 31.8	Fe/ND Ne/—	8-8-8 5-5-5	80/100	
42945	HD 219113	23ʰ 08.8	+02° 08	22ʰ 55ᵐ	23ʰ 27	2ʰ 06 W	+02° 31.8	Fe/ND Ne/—	4-4-4 5-5-5	80/100	
42946	HD 219113	23ʰ 08.8	+02° 08	23ʰ 32	00ʰ 09	2ʰ 53 W	+2° 31.8	Fe/ND Ne/—	4-4-4 5-5-5	80/100	
42947	HD 219113	23ʰ 08.8	+02° 08	00ʰ 13	00ʰ 47	3ʰ 30 W	+2° 31.8	Fe/ND Ne/—	4-4-4 5-5-5	80/100	
42948	HD 19845	3ʰ 06.4	+47° 43.7	03ʰ 59	02ʰ 00	0ʰ 52 W	+47° 58.6	Fe/ND Ne/—	4-4-4 5-5-5	80/100	
42949	HD 19845	3ʰ 06.4	147° 43.7	02ʰ 14	03ʰ 27	2ʰ 11 W	+47° 58.6	Fe/ND Ne/—	4-4-4 5-5-5	100/100	
~~42950~~	~~HD 65626~~	~~7ʰ 54.5~~	~~+57° 33~~	~~03ʰ 44ᵐ~~			~~+57° 16.5~~	Fe/ND Ne/—			
42949F											

Spectr. Temp. 42°F Dome Temp./Hum. 5°C/89% Transparency Conditions THIN CLOUD/PHOTOMETRIC/CLOUD

Focus 156R

Spectr. Temp. Dome Temp./Hum. 5°C/97%

200

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/70		V= 3.8	KO	RC	G16/1.70	RS	098-02-e	A	RS CVn		
40/70		V= 3.8	KO	RC	G16/1.70	RS	098-02-e	C	RS CVn		
40/70		3.34	KO II	RC	G16/1.70	RS	098-02-e	A	STD VEL	BROKEN 2 PIECES	
100/200		V= 4.30	KO	RC	G16/1.70	RS	098-02-e	C	RS CVn		
100/200		V= 4.30	KO	RC	G16/1.70	RS	098-02-e	A	RS CVn		
300/120		V= 7.3	G5	RC	G65/1.5	RS	098-02-e	C	RS CVn		vsl wk
300/120		V= 7.3	G5	RC	G65/1.5	RS	098-02-e	A	RS CVn		
300/120		V= 7.3	G5	RC	G65/1.5	RS	098-02-e	C	RS CVn		
300/120		V= 7.3	G5	RC	G65/1.5	RS	098-02-e	A	RS CVn		vsl wk
300/120		V= 8.1	G2	RC	G65/1.5	RS	098-02-e	C	RS CVn		
200/100		V= 8.1	G2	RC	G65/1.5	RS	098-02-e	A	RS CVn	cloud	
100/		V= 6.40	G0	RC	G16/1.7	RS	098-02-e	C	RS CVn	clouds	
										Focus should be 123R	

201

Date 25/26 Oct 1978 Observers KK/Tn

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
42949F2	Focus test			23h		0h0	+5°	Fe/—	12-12		
49F3	Focus test					"		Fe/—	12-12		
49F4	Focus test					"		Fe/—	8-8		
49F5						"		Fe/—	8-8		
49F6						"		Fe/—	8-8		
49F7								Fe/—	8-8		

Spectr. Temp. 52° F ..... Dome Temp./Hum. 52°F. 100% ++ Transparency Conditions 202

Focus ..... 130R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G16/.7	RS	098·02	A	+19a		v sl red
				RC	G16/.7	70μ	098·02	A			sl red
				RC	G12/.68	"	IIaOe	A	+3a		sl : i
				RC	G12/.68	"	IIaOe	C			blue and red not good
				"	"	BS	"	A	(should be 136R)		good
				"	G16B'/.38	BS	"	A			blue

203

Date Oct. 27-28. 1978 Observers Tor. - Tn.

8m 68°

Emulsion Batches:
II-aO-E 3038 - 16108 20 191
IIaO-E* 3038 - 28108 19 178
→ Evac

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42950F	Focus Test							Fe/—	8-8
42950	HD186791	19 41.5	+10 22	18 34	18 36	00 56W		Fe/ND4	3-3
42951	HD 212943	22 22.8	+04 12	18 44	19 03	1 17E	+4 36	"	2-2-2
42951T	Spot Cals for 42950-51				15min @	15V D4 3900	D3 4300	D2 4810	
42951F	Focus Test							Fe/—	5-5
42952	HD 17327	2 41.8	+64 14	22 12	22 51	1 51E	+64 25	Fe/ND4	2-4-2
42953	HD 17706	2 45.4	+64 02	22 59	00 18	0 27E	+64 15	Fe/ND4	2-4-2
42953T	SPOT Cals for 42952-56				15min @	15V D4 3900	D3 4300	D2 4810	
42954	HD 17443	2 42.8	+67 25	00 22	02 15	1 33W	+67 37	Fe/ND4	2-4-2
42955	HD 17327	2 41.8	+64 14	02 24	03 00	2 19W	+64 25	Fe/ND4	2-4-2
42956	HD 35410	5 19.4	-00 59	03 10	03 23	0 07W	-1 00	Fe/ND4	2-4-2
42957	HD 28363	4 23.3	+15 57	03 34	04 42	2 22W	+16 01	Fe/ND4	6-6-6
42957T	Spot Cals for 42957				15min @ 15V	D4 3900	D3 4300	D2 4810	
42957F	Focus							Fe/—	16-16

Spectr. Temp. 47°F ..... Dome Temp./Hum. 48F / H=80% Transparency Conditions ... Cloudy - Trans Lat 204

Focus ..... 145R ... 160R ..

Spectr. Temp. ..... Dome Temp./Hum. 40F / H=100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/168	BS	IIaO-e	A	Set 145R Temp 47°F	cont vs/wk	
40/13	1-2"	4.15	K3 II	RC	G43/1.5	BS	"	A	std Vel	vs/wk	
200/53	2	5.9	K0	RC	G43/1.5	BS	IIaO-e	A	std vel	cloud to slwk	vs/wk
							"				
				RC	G43/1.5	BS	"	A	Temp 48°F	set ACR sl haze	cont v/wk
400/72	2-4"	7.8	B8	Rc	G43/1.5	BS	IIaO-e	A	Su Cas Ass.	Focus 160R Temp 50°F	vs/wk
400/73	3"	8.9	B5 II	RC	G43/1.5	BS	"	C	Su Cas Ass.		vs/wk
							"				
400/73	2-3"	9.0	B9	RC	G43/1.5	BS	"	A	Su Cas Ass.	broken (2 pieces)	vs/wk
400/73	2"	7.8	B8	RC	G43/1.5	BS	"	A	Su Cas Ass.	haze	Focus? Fine
200/50		5.9	K0	RC	G43/1.5	BS	"	C	Std. Vel		fine
400/234	3"-4"	7.1	F8	RC	G12/168	BS	IIaO-e	A	Hyad. Bin.	Set 140	Fine
							"				
				RC	G0/168	BS	IIaF	A	Set 140 Temp 45°F	cont blue	

205 Sat/Sun

Date 28/29 October 1978 Observers ...Waterloo - Bits....

8m68° Emulsion Batches: IIaO 30038 - 28108 21 175

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42958	HD 218634	23h 01.5m	+8° 08'	21h 50m	23h 22m	2h 25m W	+8° 33'	Fe/ND x 4	5-5-5
42959	HD 3627	0h 34m	+30° 19'	23h 34m	00h 00m	1h 32m W	+30° 44'	Fe/ND	5-5-5
42960	HD 7927	1h 13.8m	+57° 42'	00h 20m	00h 51m	1h 43m W	+58° 06'	Fe/ND	5-5-5
42961	HD 12929	2h 01.5m	+22° 59'	00h 55m	01h 05m	1 10 W		Fe/ND	5-5-5
42961T	Spot calibration for 42958				IS 04 390	ISV 03 4300	ISV 02 4810		
42962	HD 15524	2h 24.8m	+24° 48'	1h 18m	2h 28m	2h 10m W	+25° 8.5'	Fe/ND	5-5-5
~~42963~~	~~HD 25893~~	~~4h 01m~~	~~+37° 49'~~	~~2h 37m~~					
42963	HD 40873	5h 56.6m	+51° 35'	3h 30m	4h 34m	0h 43m W	+51° 32'	Fe/ND	5-5-5
42963F	Focus							Fe/-	16 16

Spectr. Temp. 45°F ..... Dome Temp./Hum. ...88%/.5°C Transparency Conditions .photometric/haze/cloud...

Focus .....150R.....

Spectr. Temp. 40°F ..... Dome Temp./Hum. ..93%/2°C

206

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/440	2-3"	+6.6	M4III	RC	G12/1.68	BS	IIaOe	A	Waterloo		Fine
100/202		+4.6	K3III	RC	G12/1.68	BS	IIaOe	C	Waterloo		sl str
100/100		+5.6	F0Ia	RC	G12/1.68	BS	IIaOe	A	Waterloo		v sl str
40/40		3.15	K2III	RC	G12/1.68	BS	IIaOe	C	Waterloo	(sl vel)	
200/200		+6.3	F3IV	RC	G12/1.68	BS	IIaOe	A	Waterloo	Plate Broken	
~~200/31~~		+7.9	G5	RC	G12/1.68	BS	IIaOe	C	Waterloo	Hazy - would take at least 5 hours for proper exposure	
200/140		+6.4	A5	RC	G12/1.68	BS	IIaOe	C	Waterloo	Clouds	v sl str
				RC	G12/1.68	BS	IIaOe	A	focus		

207

Date O.C.T. 29/30 SUN/MON Observers B. & T.

Emulsion Batches: 6" 68 IIa-E 30038 29108 20 152

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42969F1	Focus Test					0 0	+10°	Fe/—	* -1½
42969F2						0 0	"	Fe/—	16-16
42964	HD 186791 (8 A,1)	19 46.5	+10 22	17 48	17 55	00 24W	+10 36	F-1 ND	9-9
42965	HD 176003	18 53.0	+41 1.05	18 00	1980	02 49W	+44 15	Fe/ ND	6-6 6
42965F	Spot Calc for 42964-68.				15 min @	15V	124 3900	DJ 4569	DJ 4810
42966	HD 208835	21 53.9	+4 23	19 34	21 32	1 50 W	+4647	Fe/ ND	6-6-6
42967	HD 217695	22 57.4	+47 24	21 36	00 06	3 20W	+4752	"	6-6-6
42968	HD 18337	02 51.7	+59 11	00 13	01 52	01 10W	+5931	Fe/ND	6 6-6
42968F	Focus					0"	"	Fe/—	1-6

Spectr. Temp. +41°F ..... Dome Temp./Hum. 40°F / 71% Transparency Conditions ... Fine .....

Focus .... 160R .....

Spectr. Temp. 38°F ..... Dome Temp./Hum. 28°F / 100%

208

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Comparison				RC	G12/	BS	IIaF	A	Both mounted		
				"	"	"	"	C	Firm'g		
0/25	2-4"	4.15	A3II	RC	G12/	BS	II A-E	A	STD VEL		fine
00/251	2-3	7.00	A1	"	"	"	"	A	Am MR		Fine
							"				
001/125		7.14	A0	"	"	"	"	A	Ap MR		
00/125	2	7.50	A0	"	"	"	"	A	Ap MR		
000/74		7.85	A0	"	"	"	"	A	Am MR	CLOUD	
							"	A	38°F 160R		~ cen s18

209 Mon-Tues

Date 2[illegible]/1978 Observers Kon-Tu...Dominick+John

Emulsion Batches: 8" D19 68F

D-60-G 30038-23108 19 150

D-60-E 30038-29108 18 165

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42969F	Focus Test					2h W	+26 02	Fe/—	15-6
42969	HD 1535OL=81 Her	17h 51.9	+26° 4	17h 5[illegible]	18h 40	3h 03 W	+26 02	Fe/ND4	4-6-6
42970	HD 178668=SUCyg	19 40.8	+29 01	18h 44	20 33	3 07 W	+29 10	"	6-6-6
42971	HD 222368=LP52	23h 34.8	+5° 05	20h 49	20 59	0 21 E	+5 28	"	6-66
42971T	Spot Calib	for 42969-71			15min @ 15V	D4 3900	D3 4300	D2 4810	
42972	HD 222368=LP52	23h 34.8	+5° 05	21h 08	21h 15	0h 05 E	+5° 28	Fe/ND4	3-3
42973	HD 1743	2h 42.8	+67° 25	21 55	00h 31	00 06	+67 40	"	3-3-3
42973T	Spot Calib for	42972-76			15min 15V	D4 3900	D3 4300	D2 4810	
42974	HD 16813	2h 37.4	+67° 23	00h 36	02h 49	02 23W	+67° 39	Fe/ND4	2-2-2
42975	HD 17706	2h 45.4	+64° 02	02h 58	04 49	04 17W	+64 25	Fe/ND4	2-2-2
42976	HD 17327	02 41.8	+64 14	04 56	06 02	5 33W	+64 35	"	2-2-2

Spectr. Temp. 47°F Dome Temp./Hum. +46°/88% Transparency Conditions Sl. hazy

Focus 1.60R

Spectr. Temp. Dome Temp./Hum. /96%

210

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/.68	BS	IIaF	A	(planetary nebulae)	emulsion ruined. skies' ruff	useless
300/127	2	5.8	F2IIa	RC	G12/.68	BS	IIaO-e	A	Cepheids/Eclipsing		v sl str
300/127	1-2"	6.8 7	FO-G1	"	"	"	"	A	"		v sl str
30/25	3"	4.64	F7V	"	"	"	"	A	Std Vel		v sl str
							"				
5/10	2-5	4.64	F7V	RC	G43/.5	BS	IIaO-e*	A	Std Vel		fine
300/140	3"	9.0	B9V	"	"	"	IIaO-E*	A	SV Cas Assoc	v slow Thought something wrong but registered ok and edges of tray not torn.	
							"				
300/140	2-4	9.1	A2	"	"	"	"	A	SV Cas Assoc		v slow
/140	3 3	6.8	F5V	"	"	"		A	SV Cas Assoc	Reversed Fe Arc in Stellar - took off	sl. no good
300/82	2	7.77	B8V	"	"	"	"	A	"		fine
									end	Spect. Lamps 47°F	

211

Date OCT 31/NOV 1 1976 Observers Fqi-Tn

5m 69°F

Emulsion Batches: 098-02-c 30038-25108
*098-02-c 30038-31108

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42977F	FOCUS							Fe/—	20-20
42977	HD 219113	23h 08.3	+02° 08	17h 57	19:02	1h 48 E	+2° 31.4	Fe/— Ne/—	4-4-4 5-4-5
42978	HD 219113	23h 08.3	+02° 08	19:03	19:55	0h 55 E	+2° 31.4	Fe/NDX4 Ne/—	4-4-4 5-5-5
42978T	Spot Calib for 42977 -83.			15 min	@ 15V D3 4810	7V D1 Hd	7V D2 5450		
42979	HD 219113	23h 08.3	+02° 08	19:56	20 57	0 07 W	+2° 31.4	Fe/NDX4 Ne/—	4-4-4 5-5-5
42980	HD 219113	23h 08.3	+02° 08	20 59	21:55	1h 05 W	+2° 30.9	"	4-4-4 5-5-5
42981	HD 219113	23h 08.3	+02° 08	21 57	22 50	2h 01 W	+2° 31.1	Fe/NDX4 Ne/—	4-4-4 5-5-5
42982	HD 219113	23h 08.3	+02° 08	22 52	23: 51	3 02 W	+2° 31.2	Fe/NDX4 Ne/—	4-4-4 5-5-5
42982T	Special Spot Calib for Rm (To test dewar geometries)				15 min @ 7V D2 5450		D2 5450	D2 5450	(*)
42983	HD 22468	3h 31.6	+0° 16	00 00	01.24	0 11 W	+0° 28.4	Fe/NDX4 Ne/—	8-8-8 8-8-8
42984	HD 22468	3h 31.6	+0° 16	01 26	02 30	1 17 W	+0° 28.2	Fe/NDX4 Ne/—	8-8-8 8-8-8
42984T	Spot Calib for 42984 -86.				15 min @	15V D3 4810	7V D1 Hd	7V D2 5450	
42985	HD 41593	6h 01	+15° 34	02 38	04: 52	1h 10 W	+15° 30.8	Fe/NDX4 Ne/—	8-8-8 8-8-8
42986	HD 65626	7h 54.5	+57° 33	04 57	06 10	0 33 W	+57° 16	Fe/NDX4 Ne/—	8-8-8 8-8-8
42986F	Focus Test							Fe/—	16-16
				(+) There was	4550 filter	, 5450 presumably.			

Spectr. Temp. 51°F ..... Dome Temp./Hum. 48°F / 70% Transparency Conditions THIN CLOUDS .....

Focus ..... 160R .....

Spectr. Temp. 42°F ..... Dome Temp./Hum. 36°F / 90% Aurora 4 2 4

212

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G65/.5	RS	IIaF	A	SET 160R	T=51°F 5/16 blue	
200/134	3"	V= 7.3	G5	RC	G65/.5	RS	098-02E	A	RS CVn	with V Filter & Mg Eyepiece *	v sl str comp sl str
300/121		V= 7.3	G5	RC	G65/.5	RS	098-02-e	C	RS CVn		v sl str
							"				
300/120	3-5"	V= 7.3	G5	RC	G65/.5	RS	098-02-e	A	RS CVn		v sl str
300/125	2-3	"	"	"	"	"	"	C	"		v sl str
300/121		V= 7.3	G5	RC	G65/.5	RS	098-02-e	A	RS CVn		v sl str
300/121	2-3"	V= 7.3	G5	RC	G65/.5	RS	098-02-e	C	RS CVn		
no change for 1.5 exp of 2978T							098-02-e			Virgo star 1	
100/200	2-3	V= 6.01	GOV	RC	G16/.70	RS	098-02-e	A	RS CVn	T=46°F (SPECTROGRAPH) Hg & Mg filters *	str.
40/80	2-4	V= 6.01	GOV	RC	G16/.70	RS	098-02-e *	C	RS CVn		v sl str
							" *				
80/160	3-4"	V= 7.23	dKO	RC	G16/.70	RS	098-02-e *	A	RS CVn		v sl str
80/165	1-2"	V= 6.40	GO	RC	G16/.70	RS	098-02-e *	C	RS CVn		exp fine focus sl poor
				"	"	"	IIaF	A		cent sl ied	

213

Date NOV. 1/2 . . WED/THUR. 78 Observers Bat-Tn . . . . . .

Emulsion Batches: 8" 60 . IIaO-e . 20038 . . 21083 183

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42981 F1	Focus Test Key							Fe/—	20-20
42 TTI	Full Aperture Test			Comp & Stellar				Fe/—	10-10
42987	HD 66771 (8 Mg 1)	19 41.5	+10 12	17 49	17 53	00 33W	+10 31.1	FE/ND ×4	9-9
42988	HD 176063	18 52.0	+44 5	17 56	18 58	0230W	+44 09	FE/ND ×4	6-6-6
42989	HD 190163	19 58.1	+11 11	1905	2202	0428W	+45 21	"	6-6
42987	Sun-Calc	for 42987–92			15m. @ 15V	D4 3900	D3 4300	D7 4800	
42990	HD 16855	02 37.1	+43 07	2220	0004	0011E	+43 23	FE/ND ×4	6-6
42991	HD 18331	02 51.7	+59 11	0011	0302	0232W	+55 26	"	6-6
42992	HD 30817	05 43.4	+43 59	0316	0614	0253W	+43 58	"	6-6

Spectr. Temp. 41°F ..... Dome Temp./Hum. 52°F / 76% ..... Transparency Conditions THIN CLOUDS .....

Focus ... 150R .....

Spectr. Temp. 40°F ..... Dome Temp./Hum. 37°F / 90% .....

214

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/168	BS	IIaF	A			sl red
	To check for shift not reset on plate #42975			"	"	"	"	C			v sl blue?
40/25	1"	4.15	A2 II	RC	G12/.68	LS	IIIaJ	C	SIL VEL	#2 Exp mashin	blue end low F/C
120/50	1-2"	7.00	A1	"	"	"	"	A	Am MR		v sl str
200/125	"	7.58	A2	"	"	"	"	C	"		blue end low F/C
							h			Some Cloud	
200/128	"	6.7	A2	RC	G12/.68	BS	IIaO	A	"		
120/250	2"	7.85	A0	"	"	"	"	C	Am MR		
200/205	2"-5"	7.51	A1	"	"	"	"	A	Am MR		v sl str focus?

215 Thurs/Fri

Date 23 Nov 1978 Observers Fgi - Tn

Emulsion Batches: 5m 67.5 098-02-e 31108 - 30038 17 | 75

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42993	HD 222368 Pz	23h 34.8	+5° 05	17:47	18:26	2h 43E	+5° 32.2	Fe/Ne NDx7 —	8-8 / 8-8
42994	HD 216489	22h 48.1	+16° 19	18:30	19:42	0h 40E	+16 44	Fe/Ne NDx4 —	8-8-8 / 8-8-8
42994T	Spot Calc for 42993 — 43003			15 min @ 4810	15V D3 7V H2	D1 7V 54		D2 50	
42995	HD 219134	23h 08.5	+56° 37	19:48	20:35	0h 00 E	+57 02	Fe/Ne NDx4 —	8-8-8 / 8-8
42996	HD 219134	23h 08.5	+56° 37	20:38	21:21	0h 39W	+57 02	Fe/Ne NDx4 —	8-8-8 / 8-8
42997	HD 219113	23h 08.3	+02° 08	21:32	22:28	1h 46W	+02° 27	Fe/Ne NDx4 —	4-4-4 / 5-5-5
42998	HD 219113	23h 08.3	+02° 08	22:28	23:25	2h 43W	+02 27	Fe/Ne NDx4 —	4-4 / 5-5
42999	HD 219113	23h 08.3	+02° 08	23:27	00:31	3h 50W	+02° 27	Fe/Ne NDx4 —	4-4-4 / 5-5
43000	HD 19845	03h 06.4	+47° 43.7	00:36	01:46	1h 05W	+48° 00	Fe/Ne NDx4 —	4-4 / 9-0
43001	HD 19845	03h 06.4	+47° 43.7	01:47	03:08	2h 28W	+48° 00	Fe/Ne NDx4 —	4-4-4 / 5-5-5
43002	HD 41593	06h 01	+15° 34	03:17	05:09	1h 35W	+15° 32	Fe/Ne NDx4 —	8-8-8 / 8-8-8
43003	HD 65626	07h 54.5	+57° 33	05:12	06:19	0h 50W	+57° 18	Fe/Ne NDx4 —	8-8-8 / 8-8-8
43003T	Focus Test							Fe/—	16-16

Spectr. Temp. 49°F ..... Dome Temp./Hum. 50°F/80% Transparency Conditions . HAZY → thin cloud .....

Focus ..... 140R .....

Spectr. Temp. 49 °F ..... Dome Temp./Hum. 45°F/90% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/77	4-6	V= 4.13	F7V	RC	G16/.70	RS	098-02-e	A	Std Kl		* Fine
80/160	2-3	V= 5.57	gK1	RC	G16/.70	RS	098-02-e	C	RS CVn	Power Failed	fine
							"				
80/160	1-2	V= 5.57	K3V	RC	G16/.70	RS	098-02-e	A	RS CVn		* Fine
80/161		V= 5.57	K3V	RC	G16/.70	RS	098-02-e	C	RS CVn		
100/60	1-2"	V= 7.3	G5	RC	G65/.5	RS	098-02-e	A	RS CVn	v Filter in + 2J Hg mask	* Fine
100/60	1"	V= 7.3	G5	RC	G65/.5	RS	098-02-e	C	RS CVn		* s1 str
100/55	1-2"	V= 7.3	G5	RC	G65/.5	RS	098-02-e	A	RS CVn	broken 2 pcs	* Fine
100/60		V= 8.1	G2	RC	G65/.5	RS	098-02-e	C	RS CVn		
100/60		V= 8.1	G2	RC	G65/.5	RS	098-02-e	A	RS CVn		
80/160		V= 7.23	dK0	RC	G16/.70	RS	098-02-e	C	RS CVn	(T sp = 48°F)	* Fine
80/128	2-3"	V= 6.4	G0	RC	G16/.70	RS	098-02-e	A	RS CVn		
				"	"	"	Dof	C		comp v wk but good	ok
										* all have the "dent"	fine?

217

Date Fri/Sat 3/4 NOV '78 Observers Bln - Tn

Emulsion Batches:

8m 6s D.O.-E. 30038-30108 19 178

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43004F	Focus Test							FC/—	15-15
43004	HD186 791	19h 41m.5	+10° 22'	17:42	17:49	00 38W	+10° 34'	Fe Arc/ ND×4	6-6-6
43005	HD189178	19 53.8	+90° 06'	18:06	18:46	01 23W	+90° 18'	Fe Arc/ ND×2	6-6-6
43005T	Spot Calib for 43004-06				15min @ 15V	D4 3900	D3 4300	D2 4810	
43006	HD188 209	19h 49m.0	+46° 46'	18:49	19:29	02 07W	+46 58	Fe Arc/ NDX4	6-6-6

Spectr. Temp.
Focus 135 R
Spectr. Temp.

Exp. Mir	Seen
4:/2:	
200/25	
200/	

Spectr. Temp. 52° F ..... Dome Temp./Hum. 49° F / 98% Transparency Conditions ..... Hazy - foggy .....

Focus 135 R .....

Spectr. Temp. ..... Dome Temp./Hum. ~~46~~ ° / 100% +

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	G12/168	BS	IIa F	A		T = 52° F	stellar
40/26	3"	4.15	K3II	RC	G12/168	BS	IIa-0E	C	Std. Vel.		Focus p Fine
00/125	1-2"	5.35	B5V p?	RC	G12/168	BS	IIa 0E	A	Sp. Bln - Bln		Fine
							IIa 0-E				
200/	1"	5.49	09.5 Ib	RC	G12/168	BS	IIa-0E	C	SG - Bln		Focus p. Fine

219

Emulsion Batches:
8m 68° HaO-Q 30038-30108 19 180

Date Sat./Sun. 4/5 Nov. 78 Observers Tnr.-.Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43007	HD 17327	$02^h 41^m.8$	+64° 14'	01:21	02:16	2 07 W	+64 31	Fe/nD-1	2-4-2
43007T	Spot Calib for 43007 — 08.				15 min @ 15V		04 03 3400 4300	D2 45.10	
43008	HD 16893	02 37.4	+67 23	02:22	03:27	3 22 W	+67 42	Fe/nD-1	2-

Spectr. Temp. 53°F Dome Temp./Hum. 51°F / 95% Transparency Conditions Hazy - SL Fog

Focus 135R

Spectr. Temp. Dome Temp./Hum. 48° / 100%

220

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/140	1"	7.97	B8	RC	G43/1.5	BS	IIaO-e	A	SU Cas Assoc.	Reversal	v sl wk
800/36	1"	8.97	A2	RC	G43/1.5	BS	IIaO-e	A	SU Cas Assoc	Foggy cut short ✓ IF possible can this be posted - (cut in middle of Explosion)	wk

221

Date Sun/Mon 5/6 Nov 78 Observers Rm-Th

Emulsion Batches:
8" 68° IIa-O 30038-30108 19 182
Hi-Res 17058-17108

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43009	HD 186791	19h 41.5	+10° 22	17h 37	17h 49	00h 40 W	+10° 34.5	FE N.D.x4	9-9
43010	HD 163506=89 Her	17h 51.4	+26° 4	17h 49	18 21	03 08W	+26° 03	Fe N.D.x4	6-6-6
43011	HD 186688=SAO 31	19 40.8	+09 01	18h 28	21h 00	03 58W	+29 13	"	6-6-6
43011T	Spot Calib for 43009 -13.				15ma @ 15V	D4 3900	D3 4300 D2 4810		
43012	HD 16893	2h 37.4	+67° 23	21h 13	0h 07	0h 05W	+67 41	Fe ND x4	2-2-2
43013	HD 3712=αCas	00h 34.8	+55° 59	0h 12	0h 15	02h 18W	+56° 23	Fe ND x4	3-2
43013F1	Focus Test					02h 28W	+56 24	Fe/—	6-6
43013F2	"					2 58W	+22	Fe/—	16-16
43013F3	"					"	"	Fe/—	16-16
43013F4	"					"		Fe/—	16-16
43013F5	"							Fe/—	16-16
43013F6	Full Aperture				comp- Stellar			Fe/—	8-16

Spectr. Temp. ..55°F..... Dome Temp./Hum. 58F/..72%. Transparency Conditions ..sl. Hazy.....

Focus .....135R.....

Spectr. Temp. ..59°F..... Dome Temp./Hum. 57./..80%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/23	1"	4.15	K3II	RC	G12/.68	BS	IIaO-E	A	std vel		poor focus
40/25	1-2"	5.82	F2Ia	RC	"	"	IIaOE	A	Cyph/Evans		v sl sp. p. focus
200/115	2"	6.8-7.7	FO-G1	"	"	"	"	A	"	broken in 2 equal pieces this & 5 of times	
800/154	1"-2	~9.1	A2	"	G93/.5	BS	IIaOE	A	SV Cas Assoc	cloud	v sl wk p. focus
40/11	2"	3.34	K0II	"	"	"	IIaO-E	A	std vel	exp fine comp wk, p. focus	
					"	"	IIaF	A	Temp 59°F	set 135R	
	clamped semi Firmly				G12/.68	"	IIaF	A	"	"	no stellar
	"	"	"		"	"	"	C	"	"	no stellar
	clamped Loosely				"	"	"	A	"	"	NO STELLAR
				BC	"	"	"	A	"	"	v sl red
	full aperature				"	"	"	C	"	"	v sl blue?
					BC [illegible]						

223

Date . Tues-Wed Nov 7-8 Observers . But-Tn .....

Emulsion Batches:
. Eu 0-e 17058-04118 26 208
. 09 8-02 E . 30038-02118 24 195
. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43013F7	full aperature							Fe/—	10-10
43013F8	Hartmann test							Fe/—	20-10
43013T1	Spot calibration	IV-Nh	2m	0.1667 AgNO3	2½m	appropriate	D2 7	7680 Å	
43014	HD 166731 (GM)	19 41.5	+10 22	17 33	17 39	00 43 W	+10 27.7	FE/ND	1-6
43015	HD 176003	18 53.0	+44 05	17 43	20 41	04 35 W	+44 07.6	FE/ND	3-6-6
43015T	Spot Cal for	43014-16,	43020-		15min @ 15V	D4 3900	D3 4300	D2 4810	
43016	HD 217695	22 51.4	+47 24	20 46	00 34	04 29 W	+47 46	Fe/ND4	6-6-6
43017	HD 224161	03 31.6	+00 16	00 47	01 33	00 48 W	+00 27	Fe/ND4 / —/—	8 8 8 / 8 8 8
43018	HD 224168	03 31.6	+00 16	01 35	02 24	01 90 W	+00 27	FE/NDX4	8-8-8 / 2-8-2
43019	HD 224161	03 31.6	+00 16	02 25	03 15	02 31 W	+00 27	FE/NDX4	8-8-8 / 2-8-8
43020	HD 47256	06 32.6	+27 53	03 28	05 19	01 33 W	+27 46.0	FE/ND X4	6-6-6
43019T	Spot Cal's for	43017-19		15min	15V D3 @ 4810	7V D1 Hα	7V D2 5450		
43021	HD 51418	06 52.2	+42 26	05 22	06 24	02 18 W	+42 17.2	FE/ND X4	6-6-6
43021F	Focus							Fe/—	12-12
*	Extra blank DaF in Exp Box just to make sure.								

Spectr. Temp. 46°F ..... Dome Temp./Hum. 48°F/60% Transparency Conditions .. Excellent ..... 224.

Focus .. 145R .....

Spectr. Temp. 37°F ..... Dome Temp./Hum. 36°F/92%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68	BS	IIJ0	A		46° set 145R	
				BC	"	"	"	A		"	good
											wk
40/23*	2"	4.15	K3II	BC	G12/.68	BS	II AOE	A	STD VEL Temp 46°F set 145R		fine
00/110*	3-5"	7.00	A1	"	"	"	"	A	Am MR	* Note Exp meter slide may not have been exactly in #2 detent - hence over Long exps?	str
							"				focus poor red end
00/100*	3-4"	7.50	A0	BC	G7/68	BS	II AOE	C	Ap MR		sl str
80/146	"	V=6.01	G0V	RC	G16/.78	RS	098-02E	A	R5[V...	#4 HII is for Exp meter Temp +38°F	v sl str dust
50/145	"	V=6.1	G0V	RC	G16/.78	RS	098-02E	C	R5[V...		"
80/145	"	V=6.1	G0V	RC	G16/.78	RS	098-02E	A	R5[V...		
00/90	3-2"	7.26	A3	BC	G12/.68	BS	II AOE	C	Am MR	#2 Exp meter slide	sl str red and poor focus
							09802E				
00/90	2"	6.61	A0	BC	G12/.68	BS	II AOE	A	Ap MR		str sl poor foc
				"	"	"	II aF	C	Temp 37°F		very blue

225

1928

Date Wed-Thurs. Nov. 8-9... Observers ...Fgi - Bts.....

5" DG Emulsion Batches: 098-02-G 30038-02118 22188

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43022F	Focus test	*40.2	*32					Fe/—	12-12
43022	AD* 186791	19h 41.5	+10° 22	18:00	18:28	1h 54 W	+10° 42	Ne/— Fe/ND x 4	8-8 8-8
43023	HD 186791	19h 41.5	+10° 22	18 38	18:48	1h 56 W	+10° 37.5	Ne/— Fe/ND x 4	8-8-8 8-8-8
43024	HD 200391	20h 58.1	+27° 24.8	18:58	23:06	4h 59 W	+27 46	Ne/— Fe/ND x 4	8-8-8 8-8-8
43025	HD 22468	3h 31.6	+0° 16	23:14	00:26	6h 14 E	+0° 33	Ne/— Fe/ND x 4	8-8-8 8-8-8
43025T	Spot calibration	for	43022-6		15V 03 Km/a 4810	7V 01 Hα	7V 02 5450		
43026	HD 22468	3h 31.6	+0° 16	00 28	03: 18	2h 38 W	+0° 33	Ne/— Fe/ND x 4	8-8-8 8-8-8
43026F	FOCUS TEST							Fe/—	12-12

Spectr. Temp. 48°F ..... Dome Temp./Hum. 43°F/84% Transparency Conditions ..thin..cloud, patchy..

Focus .....145 R.....

Spectr. Temp. ....48°F..... Dome Temp./Hum. 43°F/82% WINDY

226

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		*~~18~~ 7.36	B3	RC	G16/1.7	RS	098-02-e	A		too good ? → * could be HO 186587 ? TA	good
40/14		V= 2.62	K2III	RC	G16/1.70	RS	098-02-e	C	~~STD V62~~	WRONG STAR	wk
40/77		V= 2.62	K2III	RC	G16/1.78	RS	098-02-e	A	STD V62		fine
200/300		7.72	G0	RC	G16/1.78	RS	098-02-e	C	RS CVn		sl wk flare?
200/301		V= 6.0	G0 V	RC	G16/1.78	RS	098-02-e	A	RS CVn		
							098-02-e				
200/141		V= 6.0	G0V	RC	G16/1.78	RS	098-02-c	C	RS CVn	clouds	
			T= 48°F		G16/1.78	RS	"	A		? was most of exp ? too good to be true	good wsl blue center

227

Date Nov. 9/10 Thurs/Fri Observers KK - Gu - Bts / Bln - Bts

Emulsion Batches:
5m 67° IV-Nh 13117
8m 66° HIE - 02 - 01 18 132
8m 68° IIaO 24 196

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
43027	Moon	23:15	-4°53	20:38	21:08			Ne/—	20-W.1
43028	HD215182	22:38.3	+29°42	21:20	22:35		+30.06	Ne/—	20-30
43028T	Spot calibration		① D3 7080Å 7½V	② D3 7680Å 7½V	③ D3 8464Å 7½V		15m		
43029	αUMi A HD8890	1 22.6	+88 46	22:56	23:15	0014W		Ne/—	30-30-30
43030	αUMi A "	"	"	23:21	23:36	0007W		Ne/—	30-30-30
43030T	Spot calibration		① D3 15m 8464 7½V	② D3 5m 8464 7½V					
43031	αUMi A "	1 22.6	+8846	23.40	23.51	0022W		Ne/—	20-20-20
43032	HD25639	03h 59m	+62°03'	00.15	1:40	0035W	+62°13'	Fe/110μ	6-6-6
43032T	Spool calibration for 43032-34,			15m @	15V D4 3900	15V D3 4300	15V D2 4810		
43033	HD25638	03h 59m	+62°03'	1:50	04:32	0324W	+62°10'	Fe/ND×1	6-6-6
43034	HD41161 focus test	05 58.2	+48°15'	04:40	06:06	0302W	+48°11'	Fe/ND×4	6-6-6

Spectr. Temp. 52°F ..... Dome Temp./Hum. 50°F/83% Transparency Conditions Cloudy/Clear/cloud...

Focus ... 130 .....

Spectr. Temp. ... 48° F ..... Dome Temp./Hum. 46°F/90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/157	?	-10	G2V	RC	G16/.2	RS	IV-Nh	A	Std Vel.	Clouds	comp wk sl wk
40/200	4"	2.9	G8II +F	RC	G16/.2	RS	IV-Nh	C	Asn Spec KK	Clouds/Clear	comp wk star good v wk uneven
							IV-Nh				
40/245	4"	2.0	F8I	RC	G16/.2	RS	IV-Nh	A	Polaris	Clear	IR sl wk
40/241	4"	2.0	F8I	RC	G16/.2	RS	IV-Nh	C	Polaris	Clear	exp fair
							HIE film				ok
40/201	4"	2.0	F8I	RC	G16/.2	RS	HIE film	A	Polaris	clear	exp v sl str smudges
200/125		7.38	B0	RC	G12/.68	BS	IIa-OE	A	Sp Bin-Bln		
200/125		7.41	B0	RC	G12/.68	BS	IIaOe	C	Sp Bin-Bln	Cloud	
200/125	3	6.51	B0	RC	G12/.68	BS	IIa-OE	A	Sp Bin-Bln	Some cloud	focus sl str
										48° F	v. Sl. blue

229

1978

Date NOV 12/13 SUN/MON Observers Fgi - Bts

4¾ 67°

Emulsion Batches: 098-02-e 30.038 - 31108 18 158

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43035F	FOCUS							Fe/—	12-12
43035	HD 29139	4h 30.2	+16° 18'	2h 13m	2h 17m	0h 53m W	+16° 26'	Fe/— NG+	8-8 8
43036	HD 23838	3h 43.1	+44° 40	2h 24m	4h 36	3h 58m W	+44° 50.2	Fe/— NG+	8
43036T	SPOT CALIBRATION FOR 43035+				15 min @	15V D3 4810	7V D1 H2	2N D2 5455	
~~43037~~	~~HD 65626~~	~~7h 54.5~~	~~+57° 33~~	~~4h 43~~			~~+57° 16.4~~	Fe/— NG+	8
43036F	FOCUS							Fe/—	12-12

Spectr. Temp. 17
Focus
Spectr. Temp.

Exp Mtr | Seen

A) 35 6
120/200
120/

Spectr. Temp. 37°F Dome Temp./Hum. 29°F/85% Transparency Conditions . . . clear

Focus 170 K 230

Spectr. Temp. 33°F Dome Temp./Hum. 27°F/90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							098-02-e	A			v. sl blue
20/35	6"-8"	2.39	K5 III	RC	G16/1.7	RS	098-02-e	C	Std Val		sl str
100/200		V= 5.80	G0	RC	G16/1.7	RS	098-02-e	A	RS Clm		exp fine focus or flex?
							098-02-e				
100/		V= 6.7	G0	RC	G16/1.7	RS	098-02-e	C	RS Clm	CLOUDS	
							098-02-e	A		53° F	v sl blue

231 1978

Date Nov 15/16 Wed/Thu Observers Rm-Tn/Bls-Tg...

7m 67½s Emulsion Batches: IIaO-E 17058 - 04118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43037	HD 25639	03h 59.0	+62° 03	23h 45	01:38	00 54W	+62 13	Fe NDx1	5-5-5
43037T	Spot Cal's	for 43037-38			15min	@ 15V 3400 D4	5430 D3	4810 D2	
43038	HD 25638	03 59.0	+62 03	01:40	02:23	01 39W	+62 13	Fe/ NDx4	5-10
43038	Focus Test							Fe/—	5-5

Spectr. Temp.
Focus 17
Spectr. Temp
Exp Mtr

Spectr. Temp. 38°F ..... Dome Temp./Hum. 36°F/80% Transparency Conditions ... Same. Cloud .....
Focus ... 170R ..... Weak aurora - low in north 231
Spectr. Temp. 38°F ..... Dome Temp./Hum. 35°F/77% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/95	2"-3"	741	BO	BC	G12/.68	BS	IIaO E	A	S B Blu	South East of HD 25839	Fine
							IIaO-E				
200/36		7.38	BO	BC	G12/.68	BS	IIa-O E	A	Sp. Bin-Blu	cloud NW star	Focus? wk
"	"	"	"	"	"	"	"	A		T = 38°F	cent Blue

233

Thurs-Fri

Date Nov. 16-17/.78..... Observers ..K.K.-T.H.-G.a/.....

Emulsion Batches:

7m 68° IIa-0 17058-07118

5m 68° IIa-J-e 31058 15118

5m 68° 098-02e 30038 31108

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43039F	Focus Test							Fe/—	5-5
43039	HD 186791	19 41.5	+10 22	17 24	17 30	01 09W		Fe/ND.4	8-8
43040	HD159561 α oph	17 30.3	+12 38	17 41	17 50	3 41W	+12 34	Fe/—	5-5-5
43041	HD172167 α Lyr	18 33.6	+38 41	1755	1758	2 46W		Fe/-	7½
43042	α Lyr "	1833.6	+38 41	18 01	1803	2 51W		Fe/—	5-5
43043	HD 215182	22 38.3	+29 42	18 12	19 00			Fe/—	10-10-10
43043T	Spot Cals for	43039, 43, 50.		15 min	@ 15V	D4 3900 D3 4300	D2 4810		
43044	HD 215182	22 36	+2942	1910	19 40	00 24 W		Ne/—	30-30-30
43045	Lac A HD 8890	1 22.6	+38 46	19 46	20 05	255 E		Ne/—	30-30-30
43046	α Lac A HD8890	1 22.6	+38 46	2012	2025	2 34 E		—/—	30-30
43046T	Spot Calibration		15 min @ 7½V		D3 7080	D3 7680	D3 8460		
43047	Lac A	1.22.6	+38 46	2024	2047	3 11 E		—/—	30
43048	HD 1326	0 17	+3 50	2059	21 48	0 56 W		0/4c Ne/—	5 5 5 4 4 4
43048T	Spot Cals for	43040- 42, 49, 51, 52.		15 min @	17V D4 3900	15V D4 4300	15V 4810		
43049	NGC 7662	23 21.2	+41 59	22:50	23 34	03 34W 7V D1 H∝	7V D2 5450		
43049T	Spot Cals for 43048			15 min @	D3 15V 4810				

Spectr. Temp.

Focus ..... rest

Spectr. Temp.

Exp Mtr. Sect

Spectr. Temp. +41°F Dome Temp./Hum. 39°F/80% Transparency Conditions Good

Focus rest to 170R - should be same 234

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68B	RS	IIaO-e	A	Set +170R	T = 41°F cent blue	
40/23	3"			"	"	"	"	A	stove	clear	fine
40/80	2-3'	2.2	A5II	"	"	"	IIIaJ-e	A	Asm Spec KK		fine
40/90		0.63	A0V	"	"	"	"	C	Std		Str
40/80		"	"	"	"	70μ	"	A	Std		Str
40/120		2.9		"	G8/.2	70μ	IIaO-e	C	Asm Spec KK		fine
							"				
40/154	V= 2.9		G5II + G9	RC	G16/.2	RS*	HIE	A	Asm Spec KK	*+V Filter using ±2 Eye meter	
40/212		2.0	F5I	"	"	"	"	A	Polaris		
40/206		"	"	"	"	"	—	A	—		fine
							HIE				
40/209		2.0	F5I	RC	G16/.2	RS	HIE	C	Polaris	Clear	fine
100/60		V= 8.07	M1V	RC	G65/.5	RS	098-02e	A	Asm Spec	+39°F	fine
							IIIaJ-e				
400/34	Eye meter balance ?			RC	G12/.5	Beam splitter	IIIaJe	C	Planetary	Some cloud	exp good guiding fair
							098-02e				

Pg #2 235

10m 68°

Emulsion Batches: HIE

Date Nov. 16/17 Thurs/Fri. Observers Bln/Tn

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Se
43050	HD14633	02 16.7	+41 02	23:42	02:07	03 11W	+41 22	Fe/ NID×4	5-5-5	20/12	6
43051	HD33328	05 04.4	−8 53	02:11	03:37	01 56W	−8 48	Fe/—	5-55	40/37	4
43052	HD37468	05 33.7	−2° 39′	03:42	03:54	01 43W	−2 38	Fe/—	5-55	40/28	4
43052F	Focus							Fe/—	15 15		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 2.3.6..

Focus .....

Spectr. Temp. 39°F ..... Dome Temp./Hum. 36°F/89%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/110	3-4	7.26	08V	RC	G12/.68	BS	IIa-O E	C	Sp. Bin-Bln	Some cloud	bad Focus Fine
40/137	4-6	9.07	B2III	RC	G12/.68	BS	IIIa-JE	A	Be-Bln	cloud	Focus s/wk
40/29	4-6	3.5	O9.5V	RC	G12/.68	BS	IIIa-JE	C	Sp. Bin-Bln	cloud-cut short v wk	
				〃	〃	〃	IIa F	C		39°F cent s/real	

237

Sat-Sun

Date Nov 18/19, 1978 Observers BK-TN

Emulsion Batches: 29 211 Tri-X 1705R-07118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43053	HD 194093	20 18·6	+39 56	19 50	19 54	3 07 W	40 07	Fe/NDx4	6-6-6
43054	HD 218634	23 04·5	+ 8 08	20 00	20 42	1 07 W	+9 29	"	6-6-6
43054T	Spot Calc for 43053-55				Approx	15V D4 3900	15V D3 4300	15V D2 4840	
43055	HD 16895	2 37·4	+48 48	20 46	21 00	2 10 E	+49 03	Fe/NDx4	6-6-6
43055F	Focus							Fe/—	10-10

Spectr. Temp. +43°F ..... Dome Temp./Hum. 40°F / 90% Transparency Conditions semi cloudy .....

Focus .....150R.....

Spectr. Temp. 43°F ..... Dome Temp./Hum. .....

238

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/30	3"	2·9	F8 I6	RC	G12/68	BS	IIa-e	A	Waterloo		Fine
80/100	3"	0·6	M2 II	"	"	"	"	C	"		s/wt
							"				
80/30	3"	4·6	F7 V	RC	G12/68	BS	"	A	"	cloud	v s/wt
							IIa F	A	Temp +43°F	cent	v s/blue

Comparison Type Filter Exp.

229 Tues - Wed

Date Nov. 21-22/78 Observers But-Tm

Emulsion Batches: 7"67½° IIaO.e 17058-07118 23 202

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Sec
43056F	Focus Test							Fe/—	16-16		
43056	HD 186791 (8 Aql)	19 41.5	+10 22	17 23	17 27	01 25W	+10 31	Fe/ND x4	8-9	40/	
43057	HD 202313	21 09.9	+30 33	≈17 32	21 10	02 42W	+30 50	"	6-6-6	44/	
43057T	Spot Calib for 43056-57.				15min @	15V 3900 D4	4300 D3	4810 D2			
43057F	FOCUS TEST							FE/—	16-16		

Spectr. Temp.
Focus
Spectr. Temp.

Spectr. Temp. 30°F ..... Dome Temp./Hum. +28°F / 70% Transparency Conditions A Few clouds .....

Focus ..... 180. R .....

Spectr. Temp. 29°F ..... Dome Temp./Hum. ...../.....

240

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/68	BS	IIa F	C		cont	
40/24		4/5	K3II	BC	G12/68	BS	IIIa F	A	STD Vel		
00/141	3"	7.56	B9	BC	"	"	"	C	Ap MR	cloud 1/2 hr	Fair
							"				
								A?		29°F cont	

241

Sat-Sun

Date Nov 25-26 '78 Observers ... Blu-Tu / Fuji-Tu

Emulsion Batches:

7m 68° IIaO-e 17058 - 07118 22 21

5m 68° 098 02 E 20033 - 31108 34 18

TWO old?

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43058F	Focus Test					2h E	+5°	Fe/—	12-12
43058	HD 222368	23 34.8	+5 05	17 21	17 39	01 59 E	+	Fe/NDx4	10-5
43059	HD 224559	23 57	+95 51	17 42	19 53	00 03 E D4	+46 19 D3	Fe/NDx4 D2	5-5-5
43059T	Spot Calc for 43058-60,6A				15 min	@15V 3900	4300	4810	
43059F1	Focus Test stop test for 150μ slit					01 20W	+12°	Fe/—	8-8
43059F2	Focus Test					"	"	Fe/—	16-16
43059F3	" " stop test for 150μ slit					"	"	Fe/—	8-8
43059TT	Full Aperture Comp for 150μ slit					"	"	Fe/NDx4	15
43060	HD 34364	05 11.8	+33 39	22 35	00 10	1h 06 E	+33 46	Fe/NDx4	5-5-5
43061	HD 22468	03h 31.6	+0° 16	00 21	02 15	2h 41 W D3	+0° 33 D2	Ne/— Fe/NDx4	8-2-8 8-8
43061T	Spot Calc for 43061-64.				15 min @ 4810				
43062	HD 23838	3h 43.1	+44° 40	02 19	03 48	4h 02 W	+44° 55	Ne/— Fe/NDx4	8-8-8 8-8-8
43063	HD 65626	7h 54.5	+57° 33	03 54	06 31	2h 33 W	+57 18	Ne/— Fe/NDx4	8-8-8 8-8-8
43064	HD 81797 (2 Hours)	9h 22.7	-8° 14	06 37	06 42	1h 11 W	-8° 35	Ne/— Fe/NDx4	12-12 12-12

Spectr. Temp. +33°F ..... Dome Temp./Hum. +27°F/75% +15°F/92%

Focus ... 180R .....

Spectr. Temp. +30°F +20hr +21°F AT CLOSE Dome Temp./Hum. ~~+27°F/82%~~

Transparency Conditions .. Clearing at dusk .....

Good Aurora at 1hr EST

242

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							IIaF	C			cent blue
40/20	3"-5"	4.84	F7II	BC	G12/.68B	BS	IIaO-e	A	Std Vel		Fine
200/68	4"-6"	6.5	B3	BC	G12/.68B	BS	IIa-OE	C	Py *	Var ? from Ecal cloud too	Fine
							IIa-O-E			BC was removed & replaced	
Forgot to change Comp lens				BC	G12/.68B	B50u	IIaF	C	Set 200R	+30°F	
				"	"	BS	"	C	Set 200R	broken on unloading	but gradient OK
Lens changed				"	"	150u	"	A	"		cent sl blue
Same lens				"	"	"	IIaO-e	C	"		bay 3x ≈ v str
200/83	3"-6"	S.B2-6.99	Ap	BC	G12/.68	BS	IIaOE	A	Sy Bin Bla	* Either cloudy but dusk Focus = 200R	ghng effect Fine
80/168	3"	V=6.01	GOII	RC	G16/.7	RS	098-02-e	C	RS CVn	Focus To 215R / RS mostly in Temp 126°F	Focus blue end Fine
							"				
80/161	2-3	V=5.80	GO	RC	G16/.7	RS	098-02-e	A	RS CVn		Fine
80/142	3"	V=6.40	GO	RC	G16/.7	RS	098-02-e	C	RS CVn	Dec [illegible]	sl wk focus ~~Fine~~ C P4
20/32	2-3	3.40	K4III	RC	G16/.7	RS	098-02-e	A	Std Vel		Fine

243 Con./Mod

Date Nov 26/27 78 Observers Rm-Th 7m 68°

Emulsion Batches: IIaO-c 17058 - 22118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43065	HD 186688 = SAO 16	19h 40.8	29° 01.9	17h 50	19 19	0339 W	+	Fe ND x4	5-5
43065F	Focus					0h	+29	Fe/—	5-5
	Dec 1/2	Bts							
43066F2	Focus test	120μ slit		19:00				Fe/—	8-8
43065F3	comparison -	Full aperture	120μ slit		19:30			Fe/ND x4	15

Spectr. Temp. +26°F ..... Dome Temp./Hum +25°F / 70% Transparency Conditions ..Very poor.....

Focus ...205R.....

Spectr. Temp. ....25°F..... Dome Temp./Hum. ..../.....

244

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/28	2-3	6.8-7.7	FO G1	3C	G12/-68B	BS	IIaDe	A	Cepheus	KE Too cloudy may be well	not measurable wk
"				"	"	"	IIaO	A		+25°F developed?	cent blue
							batch IIaDe 17058 - 22118				
				BC	G12/688	120μ	IIaDe	A	test	center To blue Spec temp 33°F, focus 183	
				BC	G12/688	120μ	IIaDe	A	test	"	
										Extremely rotated	
										Blue //////	

245

Date Dec 1/2 Sat/Sun ..... Observers Bts .....

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD79469	9^h09^m	[illegible]	4^h40^m				Fe/ND×1,	

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. | Secti

Spectr. Temp. 33°F..... Dome Temp./Hum. ..... Transparency Conditions ..very..hazy.....
some thin cloud

Focus .....183.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~Lyot~~	5-6	3.82	B7.5	BC	GR/.688	BS	IIaOe	N	Bin Spec. Bin. Freq.		

247

Date 1978 Dec 6/7. Observers KK-TA

Emulsion Batches:
IIaJ 31058-15118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
13065T1	Comp. — full aperture					0 hr	+20°	Fe/—	10
65T2	Comp — Hartmann mask, comp position					N		Fe/—	15
65T3	Comp — Hartmann mask, stellar position					S		Fe/—	15
65T4	Comp — East side of grating masked							Fe/—	15
65T5	Comp — West side " "							"	"
65T6	Full Aperture — Roth Test							Fe/—	15
65T7	Full Aperture — Roth Test							Fe/—	15
65F8	Reg	Focus Test			Comp: Stellar			Fe/—	15-15

Spectr. Temp. 36°F Dome Temp./Hum. 33°/84% Transparency Conditions clouds

Focus 175R

Spectr. Temp. ..... Dome Temp./Hum. .....

248

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68	BS	IIaJ	A			
								C		gap shows	
								A		but crooked	
										eliminates upper gap?	
								C		both comps = 1	
								A		~ klower	
						150μ		C		wk comp	
						42μ		A		"	
						BS	"	A			

Comparison Type Filter Exp.

249 SAT-SUN

Date 1978 Dec. 9-10 Observers T.m.-PK 6h 69°

Emulsion Batches:
IIIa-J-e 31058 -07128
IIIa-O-e 17058 -22118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.	Seeing
43066T	Attempt to get HD 222368 - kept anyway for Sit Rotn measurement							Fe/—	5-5		
43066	HD 222368	23 34.8	+5 05	18 27	18 55	00 11 W		Fe/NO#4	5-5-5	30/32	4
43067	HD 219449	23 10.7	-9 38	19 02	19 32	1 13 W	-9 16	h	5-5-5	36/42	3
43066FT	Spot Calib for 43066-69.					15 min @ 15 V	D4 3900 / #3 4300	DE 4810			
43068	HD 3627	0 34.0	+30 19	19 35	19 46	0 05 W	+30 42	Fe/no#4	5-5-5	31/40	3
43069	HD 6284	0 58.7	+0 50	19 50	21 50	1 44 W	+1 12	"	5-5-5	30/68	3

Spectr. Temp. +29°F ..... Dome Temp./Hum. 20°F / 77% Transparency Conditions . Some cloud - gusty .....

Focus ... 240R .....

Spectr. Temp. +24.5°F ..... Dome Temp./Hum. 17° / 86% 250

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/68B	120μ	IIaJ-e	A	marked with X		
80/32	4"	4·64	F7V	"	"	"	IIaO-e	A	std vel	used only BS mask olv #2 + sl. str	
60/42	3-5'	5·3	K0 III	"	"	BS	IIaO-e	A	Waterloo Prog	"	
							IIaD-e				
80/49	3"	4·6	K3 III	BC	G12/68B	BS	IIaD-e	C	Waterloo Prog	BS mask	fine gr
200/68	3-5"	6·4	A6 III	"	"	"	"	A	"	" Cloud	sl str

251

Date 1978 Dec 10/11 SUN/MON Observers Fgi-Tn/ 6m 69° Emulsion Batches: IIaO-e...17056-22118

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43070	HD224559	23 53.7	+45 51	18h 12	19h 21	0h 23W	+46 21	Fe/ D4	5-5-5
43070T	Spot Calib for 43070-71				15m.	@15V D4 3900	D3 4300	D2 4510	
43071	HD 222368	23h 34.8	+5° 05	19h 23	19h 34	0h 55 W	+5° 34.5	Fe/ D4	5-5-5
						IIaF			
	December-12	Bts				IIaO 17056-22118			
43071F1	focus	plate						Fe/-	8 8
1F2	"							"	"
1F3	"							"	"
1F4								F/-	8 8
1F5	"								
1F6	"							F/-	10-10

Spectr. Temp
Focus 26
Spectr. Temp.

Exp Mtr Sec

4/37

4/3

Spectr. Temp. +24°F ..... Dome Temp./Hum. 18°F/85% Transparency Conditions . Fine & 18^ .....

Focus . . 260R .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

252

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/137	3"	6.5	B3	BC	G12/.68B	BS	II-0-e	A	Py prog		
							II-0-e				
40'/13	4"	4.64	F7I	BC	G12/.68B	BS	II-0-0	C	STD. VEL	Blue filter clouds	v s/ str
Spec tem 34°F											
				B.C.	G12/.68	150μ	II-0-E	B	focus setting "0"		
				"	"	"	"	"		0 moving in increasing black#	
					"	"	"	"		0 moving in increasing red#	
				BC	G12/.68	150μ	II-F	B	34°F	10 turns increasing red	
				BC	"	"	"	"	"	" "	
				"	"	120μ	"	"	33°	2 more turns inc red	Big Grid

253

7:30 PM

Date Dec. 12 /78 Observers Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4307 F7	Hartman Focus Test					0h		Fe/—	18-18
F8	~~Focus Test~~ To determine Set pts/disp				(Full Aperture, mistake)			Fe/—	18
F9	"	"	"					Fe/—	18-18
F10	"	"	"					Fe/—	18-18
F11	Focus Test after CCW rotn of PH Mount ⇒ ¼ Flat CCW							Fe/—	16-16
F12	" "	Some Rotn but changed Focus						Fe/—	16-16
F13	" "	further CCW rotn of PH Mount ⇒ ¼ Flat CCW						Fe/—	16-16
	Dec 13/78								
F14	Focus test	after another ½ flat CCW						Fe/—	16-16
F15	"	try again, with dial gauge to check that something actually moved							
F16	"							Fe/—	8-8
T1	Tuning test							Fe No/2	60

Spectr. Temp

Focus 0→

Spectr. Temp

Exp. Mtr. Sc

Temp 35

Temp 37° F

Spectr. Temp. 7.34°F ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus 0 → 45R .....

Spectr. Temp. ..... Dome Temp./Hum. .....

254

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Focus changed from		* 0 → ~~+45R~~		BC	G12/168	150μ	IIaF	B	* Taking out backlash by decreasing Red #'s		
		Set -10R		"	"	"	"	B	discarded		
		Set -10R		"	"	"	"	B			
		Set +90R		"	"	"	"	B			
Temp * 35 °F		Set +90R		"	"	"	"	B	* Prob unreliable Temp due to use of hot light source		
"		+45R		"	"	"	"	B			
"		+45R		"	"	"	"	B			
Temp 37°F		Set +45R		"	"	"	"	B			
		Reset +60R		"	"	"	IIaO	"		should be 117R at 37°F	
				"	"	"	IaO	"			

255

Date ...Dec. 13.... 1918 Observers ...T.E. Rice.....

Emulsion Batches:
A4 69F ..098:02E...30038:07128
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43071T2	Spot Calib Uniformity		test	15min @	(7V D2 5450 Top end)	(7V D2 5450 Bottom End)	(7V D2 5450 5 in middle, rotated 90°		
43071T3	Spot Calib	"	"	15min @	(5V D2 5450 Top End)	(10V D2 5450 mid)	(20V D2 5450 Bottom)		
43071F17	Hartmann Focus Test		ground	19h				Fe/—	16-16
43071F18	Repeat " "	"						Fe/—	16-16
43071F19	Hartmann Focus Test			0h:10	Dome Temp +30°F			Fe/—	7-7
43071F20	" "	"		0:15				Fe/—	7-7

Spectr. Temp. ..... Dome Temp./Hum. +32°F..... Transparency Conditions 256

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
"Top" on plate refers to orientation in unexp Box											
Top exposed 1st.							098-02E		These plates placed in Exp Box with		
							098-02E		"Top" up-	Should be developed Top Long.	*
Temp +37°F	Set 115R			BC	G12/168B	150u	IIa F	B	Focus changed from +60R → 115R based on		
"		"		"	"	"	"	B	an average shift of 19u of cen for blue		122R
									on plate # 43071 F16		136R
							Note	**	- Emulsions of 4x5 098's facing		
									you when label of Exp Box is		
									facing you.		
									I'm just keeping track of		
Temp +33.5°F	Set 128R			BC	G12/168B	150u	IIa 0-E	B	all orientations of the plate.		122R
		"		"	"	"	"	B			131R
				* but what does this mean?					all our holders have long edge		
				horizontal. Plates may							
				can be made!!							

257 Fri-Sat 15-16

Date 15 Dec 78 Observers KK/Int-Tn

Emulsion Batches: 7m 69s IIaO-e 17058 - 10128

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43071 F21	Focus test, after .0030 incl CCW rotation				Afternoon			Nele/2	
22	Focus test				afternoon			Ic/—	
F24	14? Focus Test							Fe/—	8-8
43072	HD 3712 (α Cas	0 34.8	+55° 59'	17 29	17 31	01 49 E	+56 22	Fe/ND×4	3-4
43073	HD 17443	2 42.8	+67 25	17 42	21 04	00 25 E	+67 40	Fe/ND×4	2-4-2
43073T	Spot Calib for 43072-77.				15min @15V	D4 3900	D3 4300 D2 4810		
43071 F23	Focus Test - done just before T1-G43 test.							Fe/—	20-20
43074	HD 16893	2 37.4	+67 23	21 10	23 31	02 07 W	+67 40	Fe/ND×4	2-4-2
43075	HD 17327	2 41.8	+64 14	23 35	00 21	02 54 W	+64 28	Fe/ND×4	2-4
43076	HD 22484	3 31.8	+00 05	00 29	00 36	02 21 W	+00 17	Fe/ND×4	2-4-2
43077	HD 30869	4 46.2	+13 29	00 45	02 34	03 04 W	+13 34	Fe/ND×4	5-5-5
43077 F1	Focus Test					"	"	Fe/—	10-10

Spectr. Temp. +36°F Dome Temp./Hum. +32°F / 82% Transparency Conditions Fine - Slight haze

Focus 121R 258

Spectr. Temp. Dome Temp./Hum. 30°F / 98%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Temp 35°F	Set 120R		BC	G2	150μ	IIaO	B	Prob set +121R on Y-Cam slit. Should be 129R		good
							E	many comp lines!		
+36°F	Set 121R		BC	G43/5B	BS	"	B	should be 193R		
40/10	1'	3.34	KO II	BC	G43/.5	BS	IIaO-e	B	Std. Vel		v sl str
800/131	2-3"	9.12	B9 V	BC	G43/.5	BS	"	B	SU Cas. Abs.		fine
							"			exposed through back	
+36°F	Set	121R		BC	G12/68B	BS	IIaO-e	B		should be 111R	
800/146	2"	8.97	A2	BC	G43/.5	BS	IIaO-e	B	SU Cas Abs.		fine
200/17	~2"	7.97	B8 III	BC	G43/.5	BS	IIaO-e	B	SU Cas Abs	Temp +36°F Stopped by pier	
200/44	~2"	5.2	F9	BC	G43/.5	BS	IIaO-e	B	Std Vel		v sl str
200/121	1-2"	6.77	F5	BC	G12/68B	BS	IIaO-e	B	Tnr Hyades Bin	cloud come	
	Temp +35°F		Set 121R				IIaO-e	B		should be 136R	

#1

259 Sun/Mon

Date Dec 17/18 ..... 78 Observers Rm - Tr

9" 680

Emulsion Batches:
IIa-O 17058 - 16128 30 210
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	Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1	43078	HD 186688 SAO 18	19h 40.8	29° 01	17h 20	18 13	3 55W	+29 16	F	5-10
	43078T	Spot Calib for 43078-80,				15min @ 15V D4 3900	D3 4300	D2 4810		
	43078F1	Focus Test for G12							Fe/—	13-15
4	43078F2	Full Aperture Exp - Test For			Stellar vs Comp shift for BS				Fe/—	15-15
1	43079	HD 22484	03 31.8	+00 05	18 54	19h 13	02 55E	+00° 23	Fe/None	8-8
	43080	"	03h 31.8	"	19h 21	19h 39	02 29 E	"	Fe None	8 8
	43080F1	Full Aperture Test of			Stellar vs Comp shift for slit				Fe/—	8-8
	43080F2	Focus Test for G12							Fe/—	15-16
	43080F3	Focus Test for G43			(mistake both exp in Comp mask mode)				Fe/—	5-5
	43080F4	"							Fe/—	5-5
	43060F5	"							Fe/—	5-5
				Dec 17	All developed in D19 @ 68°F for 9 mins					
									Tr	

Spectr. Temp. +32°F ..... Dome Temp./Hum. +38°F / 74% Transparency Conditions ..occasional cloud.....
Focus ..145R..... snow 260
Spectr. Temp. ..33°F..... Dome Temp./Hum. +30°F / 85%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/71	2-4"	6.8-7.7	F0-G1	BC	G12/1.68B	BS	IIaOE	B	Cyph/Rew	gusty - thin cloud	slwk
							IIaO-E				
Set 145R		Temp	33°F	BC	G12/1.68B	BS	IIaJ	B			cent sl red
Set 145R		"	"	"	"	BS	IIaJ	B			
200/56	3-4"	5.2	F9	"	"	BS	IIaOe	B	Test of	Clear throughout	
200/49	4"	"	"	"	"	120μ	"	B	Slicer vs 120μ	mainly clear some hazy cloud probs with Comp cloud	
Set 145R		Temp	33°F	"	"	120μ	IIIaJ	B			
"			"	"	"	120μ	"	B			cent vs/ sl red
Set to 220R		Temp	33°F	"	G43/1.5	120μ	"	B	Call, to ½ aperture test for	stellar vs comp sh. ft	
	"	"	"	"	G43/1.5	BS	"	B			cent on
	"	"	"	"	"	120μ	"	B			cent on
							Note - If anything, the conditions were slightly worse				
							for Exp # 43080 than for #43079. Hum to guide				
							by TV since slits are still out of focus.				
							Used same Exp meter BS most for both exps				

#2 Later Dec 17-18

261

Date 18 DEC '78 MON Observers Bln-Tn

5m 68° Emulsion Batches: Mad-C 31058-07128 31 27

6½m 68° Dao-C 17058-10128 23 212

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43081	HD37468	05 33.7	-2° 34'	00 24	01 52 17.5V D4	1 42W 15V D4	-2° 34' 15V D4	Fe Arc/ –	4-4-4
43081T	Spot Calc for 43081			15 min @	3900	4300	4810		
43082	HD41161	05 58.2	+48 15	02 04	03 33	2 55W D4 3900 D3 4300	+48 19 D2 4810	Fe/ND4	5-5-5
43082T	Spot Calc for	43082-83,		15 min @ 15V					
43083	HD47937	11 10.7	+13 23	03 41	04 39	1 09E	+13 01	Fe/ND4	5-5-5
43083F	Focus							Fe/—	7-7

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr.	Seen
90/112	3
90/103	3
90/99	3

Spectr. Temp. 32°F ..... Dome Temp./Hum. +22°F / H=88% Transparency Conditions ..Clear by 0⁴.....

Focus ....141R.....

Spectr. Temp. +24.5°F..... Dome Temp./Hum +17 /.....

262

Aurora at 0230

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/112	5"-3"	3.51	09.5II	BC	G12/68B	BS	IIaJ-C	B	Sp Bin-Bln		v. fr
							IIIaJ-C				
400/103	3-7"	6.51	B0	BC	G2/68B	BS	IIaO-E	B	Sp Bin-Bln	Focus @ 150R Temp +28°F	Fa/wk ~~wk~~ vsl stm
							IIIaO-E				
400/49	3-5"	6.49	A6n	BC	G12/68	BS	IIaO-E	B	Sp Bin-Bln	Focus @ 175R Temp 24° Cloud	Fa/wk v. sl wk
				"	"	BS	"	B		Set 175R	ca. fr sl Rad

263

Date .DEC. 18/19.. MON/TUES 78 Observers But.-Tu.....

6m 68°

* 7m 66°

Emulsion Batches: II.a.O.-e..17.058.-18128 23 188

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43084	HD 208835	21 53.9	+46 23	17 18	20 25	3 58 W	+49 50	FE/	5-5-5
43084F	Focus Test							Fe/—	5/5
43085	HD 16655	02 37.1	+43 07	20 33	21 52 D4	0 40W D3	+43 29 D2	Fe/ND4	5-5
43084T	Spot calib for 43084-89			15 min @	15V 3420	4300	4810		
43086	HD 18337	02 51.7	+59 11	21 55	01 05	3 38 W	+59 33	Fe/ND.4	6-?12
43087	HD 38817	05 43.4	+43 59	01 10	04 05	3 48 W	+44 02	"	6-6
43088	HD 93431	10 42.1	+6°52	04 14	06 56	01 42 W	+6 31	"	6-6½
43089	HD 124897	14 11.1	+19 42	0700	0701.	0141 E	+1921	"	9-9
43087F	Focus Test							Fe—	6-6
43089T	Comp test							FeNe/4	60s

Spectr. Temp

Focus... 175

Spectr. Temp.

Exp Mtr See

4.195. 4

40/104

40/98

40/120

40/107

40

Spectr. Temp. +25°F Dome Temp./Hum. +18°F / 72% Transparency Conditions ... High Cirrus - Thin Fine.

Focus ... 1.75R

Spectr. Temp. ... Dome Temp./Hum. +7°F / 97% Frosty

264

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/95	4"-7"	7.39	A0	BC	G12/.68	BS	IIaOE	B	Ap MR		fine
	Temp +25°F	Set 1.75RBC			"	"	IIaO	B			cont sl Kod
400/101	5"	6.7	A2	BC	G21KB	BS	IIaO-E	B	Am MR		lost
							"				
400/98	5"	7.85	A0	BC	G12/68	BS	"	B	Am MR	? filter wheel spins during comp	fine
400/120	3"-5"	7.51	A1	"	"	BS	"	B	Am MR	Temp +14°F Focus 210R	v sl str
400/107	3"-8"	7.07	A2	"	"	BS	"	B	SpBin-Bln	Temp +13°F	v sl str
40/11		1.29	K2IIIp	"	"	"	" *	B	std vel		fine
Set 210R				"	"	"	"	B	Too Cold - Mask motor stuck		
T = 32°F	Set 150R			BC	"	150μ	" *	B		new diffuser in p. #4	ok

strong Hg line on all recent spectra with long exp.

Date Dec. 23/24 Sat/Sun ..... Observers . MYB - BTS .....

Emulsion Batches: IIaOe . 17058 - 18128

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43090F1	Focus test							Fe/—	5-5
F2	Focus test							Fe/—	5-5
43090	51 Peg HD217014 BS 8729	22h52.6	+20°14	17 44	19 30	2 23 W	+20°36	Fe/ND	5-5
43091	HD10307 BS 483	1 35.7	+42 07	19 48	22 06	2 17 W	+42°28	Fe/ND×4	5-5
43092	HD10307 BS 483	1 35.7	+42 07	22 12	23 00	3 11 W	+42°28	Fe/ND×4	5
						D4	D3	D2	
43092T	Calibration Plate 43090 — 43092				15 min @ 151	3900	4400		
43092F1	focus test							Fe/—	5-5
2F2	focus test							Fe/—	5-5

Spectr. Temp. .....
Focus 30
Spectr. Temp. .....

Exp. Mtr | Seen

Spectr. Temp. 34°F Dome Temp./Hum. 32°F/85% Transparency Conditions Hazy

Focus 130R

Spectr. Temp. 32°F Dome Temp./Hum. 29°F/91%

Clouded Out.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G2/.68	BS	IIaOE	B	Focus	temp 34°F set 130R	OK
				BC	G12/.68	BS	IIaOE	A	Focus	temp 32°F set 130R	Cont V Fair to P
50/200	>1"	6.2	G5	BC	G12/.68	BS	IIaOE	B	Solar-Type	used B&W filter + mask on exp meter	wk Fe Str
82/200	>1"	5.6	G2	BC	"	"	"		"		wk Fe V Str
33/200	>1"	5.6	G2	BC	G12/.68	BS	IIaOe	B	Glen Type		Fe wk or vs wk Fine
										note: 43090 F1 / 43090 F2 / 43090 J68° 7m already developed	
	(blank)			"	"	"	"	A	focus	temp 32°F set 130R 10 turns RT	
	blank			"	"	"	"	A	focus	temp 32°F set 130R 10 turns RL	
										reset to 130R	

Dev Dec 27 D19

267

Date DEC. 27/28 Observers Tnr — Tn

Emulsion Batches:
IIaO-e

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43093	HD 17706	2 45.4	+64 02	19 03			+	~~Fe/no~~	~~5~~
43093F1	Focus Test							Fe/—	8-3
F2	" "							Fe/—	10-10

Spectr. Temp. +26°F ..... Dome Temp./Hum. -10°C / 85% Transparency Conditions ... Cloudy .....

Focus ... 255R ... "For G43" ..

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~800/~~	~~4"~~	~~8.89~~	~~B5 IV~~	~~BC~~	~~G43/1.5~~	~~B5~~	~~IaOe~~	~~B~~			
				"	"	"	"	B	Temp +26°F	Set +255R blank?	discredit
				"	G8/-.25	120μ	"	B	Temp +25°F	Set +185R? Should be 130R center Red	

269

Thurs-Fri

Date DEC 28/29 Observers Tnr-Tn

Emulsion Batches: IIaO: e 17058 - 24128

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Spectr. Temp / Focus / Spectr. Temp	Exp Mtr	Se
43094F1	Focus Test							Fe/—	20			
F2	Focus Test							Fe/—	5-7			
43093	HD 9138	1 24.9	+5 38	17 31	17 48	1 29 E	+5 57.9	Fe/ND×4	3-3-3		80/20	
43094	HD 17706	2 45.4	+64 02	17 56	20 52	0 11 W	+64 17.1	Fe/ND×4	3-3-3		400/52	
43093T	Spot Cals for 43094 - 43101			15 min @ 15V		D4 3900	D3 4300	D2 4810				
43095	HD 30869	4 46.2	+13 29	21 15	22 15	0 24E	+13 36	Fe/ND×4	5-5-5		200/62	
43096	HD 28363	4 23.3	+15 57	22 22	23 48	1 33 W	+16 05	Fe/ND×4	5-5-5		200/61	
43097	HD 28226	4 22.1	+21 24	23 58	0 26	2 11 W	+21 34	Fe/ND×4	5-5-5		80/25	
43098	HD 27383	4 14.2	+16 18	0 29	2 25	4 17 W	+16 28	Fe/ND×4	5-5-5		400/125	
43099	HD 93244	10 40.9	+6 54	2 33	3 57	0 37 E	+6 28	Fe/ND×4	5-5-5		400/99	3
43100	HD 127617	14 27.3	+19 13	4 11	6 48	1 32 E	+18 51	"	5-5-5		80/60	3
43101	HD 124897	14 11.1	+19 42	6 52	6 52	1 10 E	+19 16	"	7-8		40/12	
43101F	Focus Test							Fe/—	15/15			

Spectr. Temp. +23°F ..... Dome Temp./Hum. 46°F / 46% Transparency Conditions .. Fine ... s/haze .....

Focus .....

Spectr. Temp. +13°F ..... Dome Temp./Hum. +5°F / 90% 270

* note 44 F1 s f2 s 93093 developed temp 64°.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G8/-.25	120m	IIIa J	A		Set 140R Temp +23°F * Extra = 5 sec comp due gapadj-	cont. v Fuzzel?
				BC	G43/.5	BS	IIaO-e	B		Set 270R Temp +23°F	cont. vs/Kel sl wk
80/20	3"	6.2	K4	BC	G43/.5	BS	IIaO-e	B	Std. Vel.		Comp wk
400/52	3"	8.89	B5 IV	BC	G43/.5	BS	IIaO-e	B	Su Cas Ass.	str Hγ, loose scr ow	cont Arc
							IIaO-e			Fo Arc repaired	
200/62	1"-2"	6.77	F5	BC	G12/.68	BS	IIaO-e	B	Tnr Hyades Rin.	Temp 20°F Set 210R	
200/61	1"-2"	7.12	F8	BC	G12/.68	BS	IIaO-e	B	"		"
80/25	1"-2"	5.99	Am	BC	G12/.68	BS	IIaO-e	B	"		
400/125	1"-2"	7.44	F8 V	BC	G12/.68	BS	IIaO-e	B	"	+17°F	
400/99	3-2	7.29	K0	BC	G12/.68	BS	IIaO-e	B	Mistaken-me	ant HD 97937	sl wk
800/60	3"-4"	8.2	Be	"	"	"	"	B	High Lat. Be-Tnr	+15°F Set 225R	
40/12		1.2	K2 III p	"	"	"	"	B	Std Vel		vs/wk
				"	"	"	IIIaJ-e	B	Se/225R Temp +13°F		Center Rel

271 Wed-Thurs

Date Jan 3-4 Observers R. / Fgi-Tn

Emulsion Batches: 098-02

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43101 F_2	Focus test							Fe/—	3.5
F3	"							"	"
F4	"							"	"
[illegible]		Later at 18h							
43101 F5	Focus							Fe/—	12-10
43102	~~HD 21242~~	~~3h 20.5~~	~~+28° 22~~	20:08	~~≈20:40~~	0 15 W	+28° 35	Fe/No. —	3
Note - Call this 43102A & reserect - it's not bad									

Spectr. Temp. +13°F..... Dome Temp./Hum. night +7°F/80% Transparency Conditions . some cloud - gusty.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

272

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B12		150u	IIaO	B	15°F	505 nm	cent B line
				"		"	"	"	"	500	cent for B line
				"		"	"	"	"	510 – Centre to blue 6 mm	
										1 unit = 10 divisions on old wheel	
										Increasing numbers moves plate away	
										from camera mirror	
Dome Temp			+9°F	BC	G16/17	RS	098	B	+13°F	512	cent vs/Red
400/33	4"	N=6.5	G5	RC	G16/17	RS	098	B	~~RS cut/Fgn Temp +13°F~~	RS Mask + V Filter in too windy	
									# 43102 in Exp box but probably discardable.		
									Note – 43102 can be used as a test of the Mask + V filter		
									Exposure Probably need ≃ 400/100 with Mask + V		
									I forgot about KK's note of Dec 10 to this effect		

273 Thu-/Fri

Date Jan 4/5 1979 Observers Rm-Tu/Blu-Tu

Emulsion Batches:
IIaO-e 12108-28128 NEW 22192
IIIaJ-e 31058-19128

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43102	HD17706	2h 45.9	+64° 02	19h 47	22 51	2h 39 W D4	+64 18 D3	Fe ND×4 D2	4-4-4
43102T	Spot Calib for	43102-03, 06-09			15min @	15V 3900	4300	4810	
43103	HD 20365	03 11.5	+49° 51	23h 02	23 09	2h 32	+50° 04.8	Fe ND×4	4-8
43104	HD 33328 = λ Eri	05h 04.9	-8° 53	23h 20	00 08	1 40 W	-8° 50	Fe/—	5-5-5
43104T	Spot Calib for	43104,5			15min @	17.5V D4 3900	15V D4 4300	15V D4 4810	
43105	HD 37468	05 33.7	-2 39	00 13	00 39	01 35W	-2 39	Fe/—	5-5-5
43106	HD 86590	09 54.6	+25 02	00 55	04 08	00 49W	+24° 35'	Fe/ND4	6-6-6
43107	HD 88021/2	10 03.8	+20° 49'	04 13	05 46	02 18W	+20° 2[illegible]'	Fe/[illegible]	6-6-6
43108	HD 114455	15 49.1	+13 01	05 53	07 00	02 07E	+12 43	Fe/[illegible]	6-6-6
43109	HD 129997	14 11.1	+19 19	07 04	07 05	00 29E	+19 19	"	9-9
43109F1	Focus							Fe/—	9-9
43109F2	Focus							Fe/—	9-9

Spectr. Temp. +15°F ..... Dome Temp./Hum. +10°F / 80% Transparency Conditions ..... some thin cirrus - 0.1 .....

Focus ... 520 .. Fwr. 643 ....

Spectr. Temp. +10°F ..... Dome Temp./Hum. +5°F / 85% * Note - How do New IIaOs shape up? 274

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/125	3-1"	8.78	B5 I	BC	G43/.5	13s	IIaOE *	B	SU Cas Reg	Focus 520 Hg Em	110 Fe? Fine Em
							"			Halo's on some spots ?? no Fe	↓
80/11		5.1	B3	"	"	"	"	B	B Std. Vel.	NW star of apir	Some?
40/70	1-2	4.07	B2 II	BC	G12/.68	BS	IIIaJ-e	B	Sp Bin-Blu	Focus 513 Temp +12°F	Fe vs/wk Fine
							IIIaJ-e				
40/55	1-2	3.57	O9.5V	BC	G12/.68	Bs	"	B	Spec-Phy		Fe vs/wk S/str
800/240	1-3-2"	7.91	dG5	BC	G12/.68	BS	IIaOE	B	Sp Bin-Blu	Focus 514 Temp +12°F	Fe sl wk sl wk
400/14	2"	7.20	g65+ A2	BC	G12/.68	BS	IIaOE	B	Sp Bin-Blu		Fine
400/120	2-3	6.50	A0	BC	G12/.68	BS	IIaOE	B	Sp Bin-Blu		Fine
40/12	2	1.09	K2 III	BC	G12/.68	BS	IIaOE	B	Std. Vel.		sl wk
				"	"	BS	IIaJ	B	Sel 514 +10°F	cont vsl wk	
				"	"	"	"	A	"	" AO Comp Exp	
Jan 5	IIaOs	D19, 7min @ 68°F									
	IIIaJs ≤ 2 cgs 5min @ 68°F										

275 Sat-Sun

Date Jan 6-7 Observers BK-Tm

Emulsion Batches: IIaOE 12108-28128 16 202 11aw

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43110	HD 222368	23 34.8	+5 05	17 31	17 42	0 50W		Fe/	6 6
43111	HD 3165	0 29.8	+36 17	17 50	19 17	1 29W	36 45	"	6-6-6
43111T	Spot Calib for	43110 - 118.			15min @ 15V	D4 3900	D3 4300	D2 4800	
43112	HD 13994	2 11.0	+57 04	19 25	20 20	0 50 W	57 26	Fe/	6-6
43113	HD 28912	3 35.7	+71 18	20 30	22 20	1 22 W	71 34	"	6-6-6
43114	HD 57044 A	7 14.5	+73 16	22 28	0 05	0 32E	73 04	"	6-6
43115	HD 71152	8 10.7	+24 52	0 20	1 10	0 29E	24 38	"	10-10
43116	HD 71663	8 23.5	-2 11	1 14	2 14	0 35W	-2 24	"	11-11
43117	HD 101177	11 33.5	+45 40	2 26	3 54	0 56E	+45 15	"	11-11
43118	HD 74874	8 41.5	+6 47	3 58	4 30	2 30W	6 32	"	11-
43118F1	Focus Test						"	Fe/	11-11
F2	"	"					"	Fe/	11-11

Spectr. Temp.
Focus 5/
Spectr. Temp.

Spectr. Temp. +17°F ..... Dome Temp./Hum +16°F H=75% Transparency Conditions Excellent so far .....

Focus .... 512 .....

Spectr. Temp. +15°F ..... Dome Temp./Hum. +10°F 90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/10 **	<1"	4·64	F7 V	BC	G121.68B	BS	IIIa-O	B	Std Wet	* ** = Number seemed to slow Note low "Q" factor maybe bad due to Bad Decker connection	Fine
400/150	1"	8·0	K3 II	"	"	"	"	B	Wet Prog	between 2 missing	Fine
									"		OK
200/70	1·2"	7·0	G2 III	B.C	G121.68	BS	"	B	Wet Prog	Fe line trouble	wk Fe Fine
400/150	"	7·9	K0 III	"	"	"	"	B	"		Fine
400/120	2"	7·24	F0	"	"	"	"	B	"	band for Fine Weak star of close pair	Fine
400/100	1"	7·18	A3	"	"	"	"	B	"	Brt of pair +17°F III	Fine
400/80	1"	6·57	F0	"	"	"	"	B	"	thin cloud	Fine
400/70	1·2"	6·96	F5	"	"	"	"	B	"		Fine
400/50	2	7·06	F8	"	"	"	"	B	"	cloud	Fine
Set 512				"	"	"	"	A			cut Fucked
Set 512				"	"	"	IIIaJ	B		(should be set 510)	cent slit
			Dev Jan 8	D19	7 min @	65°F					

277

Emulsion Batches:
IaO a 1.108-06019 17201
5" 127-02E 31036-07.128 39 192

Date JAN 8/9 MON-TUES 79 Observers K. W. Ja

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43119	HD 18327	02 51.7	+59 11	19 05	22 04	02 04 W	+59 25	FE ARC	7-17
						D4	D3	D2	
43119T	Spot Calib for	43119			15 min	@ 15V 3000	4350	4200	
43120	HD 21242	03 20.5	+28 22	22 17	00 53	4 23 W	+28 34	Fe/ND4	9 9
						15V D3	D17V	No/—	9 9
43120T	Spot Calib for	43120.			15 min @	4810	Hα	D27V	
43120F1	Focus Test							Fe/—	9/9

Spectr. Temp. +22°F Dome Temp./Hum. +16°F/90% Transparency Conditions Sl. [illegible]

Focus 510

Spectr. Temp. +15°F Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
[illegible]/150	3-4	785	A0	BC	G12 [illegible]	[illegible]	[illegible]	B	[illegible]		comp weak slack
							"				
[illegible]00/110 *	3-5	V= 6.5	G5	RC	G16/1.7	RS	098-02E	B	RSCVn [illegible]	* Clear [illegible] ? too slow is it representative?	
							"			Snow Lowl [illegible]	
				BC	G21/1.68	BS	098-02E	B			

IIaO Dev Jan 13 D19 7 min @ 68°F Bts

098-02E Dev Jan 14 D19 5 min @ 68°F Bts

279

Date JAN 9 10 TUES. WED. 79 Observers Bat-Ta

Emulsion Batches:
Ilford 12108 — 06019 16 19
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43121	HD 16855	02 37.1	+43 07	17 50	19 41	-00 03 E	+43 27	FE ARC/ ND 4	7-7
43121T	Spot Calib for 43121 — 27.				15 min @ 5V	D4 3900	D3 4300	D2 4810	
43122	HD 38817	05 43.4	+43 59	19 58	22 40	-00 09 E	+44 00.	Fe/ "	7-7-7
43123	HD 43496	06 11.4	+15 53	22 48	01 15	01 58 W	+15 52	"	7-7-7
43124	HD 47256	06 32.6	+27 53	01 19	03 42	04 04 W	+27 50	"	7-7-7
43125	HD 89449	10 14.3	+19 59	03 48	03 58	00 39 W	+19 34	"	7-77
43126	HD 138406	15 26.8	+62 05	04 06	05 09	3 20 E	+61 48	"	7-7-7
43127	HD 137182	15 19.5	+10 54	05 17	07 07	1 16 E	+10 38	"	7-7-
43127 F1	Focus Test							Fe/—	17 17
43127 F2	" 11 4							Fe/—	7-17

Spectr. Temp
Focus
Spectr Temp

Exp Mtr	Sec
11	3
400/ 100	3
400/ 25	2
400/ 100	2
80/ 25	
400/ 93	2
400/ 97	4

Spectr. Temp. 5.10 ..... Dome Temp./Hum. 11°F/22% Transparency Conditions Sl. Hazy .....

Focus 15°F .....

Spectr. Temp. 10.5°F ..... Dome Temp./Hum. 16°F/95% 280

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
?	3-2"	6.7	A2	BC	G12/688	BS	IIaOE	B	Am MR	NO EXP MTR	Fine festr
							"				
400/101	3-1"	7.51	A1	BC	G12/688	BS	"	B	Am MR	some cloud	Fine
400/ 95	2-3	7.16	B9	"	"	"	"	B	Am MR	+12°F Focus 512 Cloud	Fine
400/103	2"-4"	7.26	A3	"	"	"	"	B	Am MR	some cloud	Fine
80/25	1"	5.3	F5	"	"	"	"	B	Sl Vel		Fine
400/93	2"	6.79	A0	"	"	"	"	B	Am MR		Fine
400/97	1-2"	7.19	H0	"	"	"	"	B	"		Fine
				"	"	"	098	A	After Acq	Vel 10.5°F not changed	Centered in Hlve Ref OK
				"	"	"	098	B		"	OK
			IIaOE Dev JanB		D19 7min		@ 68°F Bts				

281

166-2102

Date Jan. 10-11, 79 wed/Th. Observers Rm.-Bb.

Emulsion Batches: 4400-/2103-0019...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43127F3	Focus Test							Fe/—	5-5
7F4	"							Fe/—	5-5
43128	HD177[illegible]	2h 45.4	+60° 02	18:11	21:29	1h 38 W	+64° 22.7	Fe ND×4	3-4-5
43128F	Spect Calib for 43128-			15 min @ 15V	B4 3900	03 4300	D2 4810		
43129	HD[illegible]	3h 11.5	+49° 51	22h 96	22:59	02 96W	+50° 10	Fe ND×4	6-6
43130	229 Pl	3h 31.8	+06 05	23h 12	23:39	03 02W	+00 22	Fe ND×4	6-6
43131	HD 33328 = 2 Gr	5h 01.4	-3° 53	00h 05	01 09	03 04	-8° 45	Fe/—	5-5
43132	HD 45542 / V611 Mon	6h 23.02	+20° 17'	01 55	04 18	03 41	+20 15	Fe ND×4	5-5-5
					17.5 04	15 D4	15 D4		
43132F	Spool cal for 43131			15 min @	3900	4300	4810		
43133	HD 79469	9h 09.2	+2° 44'	04 51	0559	0350	+2 27	Fe ND×4	5-
43133F	-focus							Fe/ND×4	11-11

Spectr. Temp.
Focus.....
Spectr. Temp

Spectr. Temp. ....14°F..... Dome Temp./Hum. ..... Transparency Conditions .Clear, thin cirrus.....

Focus .....521..... 282

Spectr. Temp. ..... Dome Temp./Hum. ..-1°F..!!...

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				13C	G93/.5	85	IIaOE	B		cent Red	
				"	"	"	"	A		cent Red line of Miller Comp double Fe lines	
800/90	7-8	8.78	B5V	"	"	"	"	B	SU Con. Assoc.	cloud	wk
48/6		5.1	B3V	"	"	"	"	B	BStd Vel	NW Stds	Fine
40/8		5.2	F9	"	"	"	"	B	std Vel		Fine
40/21	3-4	4.07	B2V	"	G12/.68	"	IIIaJ	B		Spectrogram 10°F ⇒ 514	s/wk
400/320		4.04	B7Vc	"	"	"	IIaOe	B	Bln High Pt	Cloud	str
400/185	2-3	3.82	B9.5Vp	"	"	"	"	B	Bln Br. Sp Bln	Cloud	
				"	"	"	"	B		+3°F	
		IIaOe	Dev	Jan 13	D19	7 min @	68°F	Bts			
		IIIaJ	Dev	Jan 13	D19	4 min @	68°F	Bts			

283

Date Jan. 11/12. 79. Thu Fri Observers Inr. – Bts

not evacuated

Emulsion Batches: IIa O 12108 – 12019 16 191

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43134	HD 3712	0 34.8	+55 59	18 58	19 08	01 35	+56°22	Fe/ND1	5 5 5
43135	HD 17327	2 41.8	+64 14	19 40	20 54	1 11 W	+64° 29	Fe/ND	4-4-4
43136	HD 3712	0 34.8	+55 59	20 57	21 58	4 25 W	+56° 28	Fe/ND1	6-6
43137	HD 16893	2 37.4	+67 23	22 09	0 53	5 16 W	+67 46	Fe/ND1	4-4-4
43137T	spot cal for 43134 —			15 min @	15V D4 3900	15V D3 4300	15V D2 4810		
43138	HD 91316	10 27.5	+9 49	1 09	1 15	2 09 E	+9 23	Fe/ND1	6-6
43138-F	FOCUS TEST							Fe/—	5 5

Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr	Se
45/88	
460/70	
45/10	
800/163	
4m/8	

Spectr. Temp. ...12°F..... Dome Temp./Hum. ..... Transparency Conditions .Clear/thin clouds.....

Focus .....522.....

Spectr. Temp. ..... Dome Temp./Hum. .....

284

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/88	1-2	3.34	K0 II	BC	G43/.5	BS	IIaO	B	Std. Vel.	plates just cut	comp str Too str comp str Fine comp str Fine comp too str Fine
400/70	1	7.97	B8 III	BC	G43/.5	BS	IIaO	B	Su Cas Assoc.		
40/10	1	3.34	K0 II	BC	G43/.5	BS	IIaO	B	Std. Vel.		
800/160	1	8.97	A2	BC	G43/.5	BS	IIaO	B	Su Cas Assoc		
40/8	1	3.6	B0 I	BC	G43/.5	BS	IIaO	B	B Std. Vel		v sl str Comp. v str ok
				BC	G43/.5	BS	IIaO	B		11°F	
	IIaO	Dev	Jan 13		019	7 min @ 68°F		Bts			

285 Fri/Sat

Date Jan 12/13 Observers Bln-Bts

Emulsion Batches:
IIIa-J E* 31058-19128
IIIa-J E** 31058-12019

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Focus / Spectr. Temp
43139F	Focus							Fe/-	17-17	
43139	HD 24760	03 51.1	+39°43	17 39	17 55	-02 51E	+39 54	Fe/-	6-6-6	20/31
43140	"	"	"	18 03	18 24	-02 21E		Fe/-	6-6-6	20/30
43141	"	"	"	18 30	18 48	-01 58E		Fe/-	6-6-6	20/30
43142	"	"	"	18 55	19 07	-01 38E	+39 54	Fe/-	6-6-6	20/31
43143	"	"	"	19 15	19 29	-01 17E		Fe/-	6-6-6	20/30
43144	"	"	"	19 35	19 59	00 48E		Fe/-	6-6-6	20/45
43145	"	"	"	20 04	20 26	00 21E		Fe/-	6-6-6	20/45
43145T ✓	spol cal for 43139—145				15min@	17.5V 04 3900	15V 04 4300			
43146	HD 24760	"	"	20 30	21 27	00 41W		Fe/-	6-6-6	20/90

Spectr. Temp. 17°F ..... Dome Temp./Hum. 16°F/94% Transparency Conditions . Haze and cloud .....

Focus ..... 508 .....

Spectr. Temp. 17°F ..... Dome Temp./Hum. 15°F/93%

286

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G8/-.25	BS	O-98 Boze	B		17° F	DK
20/31	1"	2.71	Bausch	BC	G8/-.25	BS	IIIa-JE*	B			F+D
20/30		"	"	"	"	"	"				"
20/30		"	"	"	"	"	"			✓	"
20/31		"	"	"	"	"	"			✓	"
20/30		"	"	"	"	"	"			✓	"
20/45		"	"	"	"	"	"			✓	"
20/45	1-2	"	"	"	"	"	"				"
20/90		"	"	"	"	"	IIIa-JE*			Only exposed 2 hr Cloud, No Cal. b. ✓	F+D

IIaJ Dev Jan 13 D19 4min @ 68°F Bts

O98boze Dev Jan 14 D19 5min @ 68°F Bts

287 Sun-Mon

Date JAN. 14-15/1979 Observers Tm-Bts/Dls

Emulsion Batches:
4½ IIaJ-e 31058-12019
7½ IIaO-e

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Sec
43147	HD 24760	03 51.1	+39 43	17 47	18 16	2 23 E		Fe/—	12-12	2½	4
43148	"	"	"	18 27	18 45	1 54 E		"	11-11	2½	3
43148F	focus							Fe/-	11-11		
43149	HD 24760	03 51.1	+39 43	21 56	22 10	1 31 W		Fe/—	11-11	2½	2
43150F	focus							Fe/ND4	11-11		
43150	HD 79469	09h 09m	+2° 44'	01h 18m	02h 02m	+00h 09W	+02 24	Fe/ND4	5-5-5	10	4
43151	HD 88021/2	10h 04m	+20° 49'	02h 18	04h 10m	+01h 24W	+20 26	Fe/ND4	5-5-5	20½	2

Spectr. Temp
Focus 50
Spectr. Temp

Spectr. Temp. 25°F ..... Dome Temp./Hum. +17°F ..... Transparency Conditions ..... cloudy mainly .....

Focus ..... 505 .....

Spectr. Temp. +24°C ? ..... Dome Temp./Hum. .....

>1h clear, windy / cloudy

288

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/36 *	4"	2.71	B05 V	BC	G8/-25	120u	IIIaJe	B	SB Tm	* clear slide for Exp meter gusty	guiding st upstairs
20/28	3"	"	"	"	"	BS	"	B	"	cloud & snow	dust v sl wk
				"	"	"		B			ok
20/?	2"	2.71	B05 V	BC	G8/+25	BS	IIIaJe	B	SB Tm	thin cloud * meter failed	dust v sl wk
						comparison lines very uneven				Focus 507 P Temp +23°	
				BC	G12/1.68	BS	IIaDe	B		20° F set 510	
not working	4"			BC	G12/1.68	BS	IIaDe	B	Bln Br Sp Bin.	clear	st str
200/32			A2+ g65	BC	G12/1.6 r	BS	IIaDe	B	Bln High Pr.	some cloud exp meter now working clouded out spectrograph and 16°F	

289

Date Jan 16/17 79 (Tues/Wed) Observers But-Bta

8m Dig 60° Emulsion Batches: IIaDe 12108 - 12019 16 197

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43152F	focus							Fe/ND4	11-11
43152	HD 16855	02 37.1	+43 07	17 45	18 50	-0025E	+43 25	Fe/ND4	5-7-7
43153 ✓	HD 18337	02h 51.7m	+59° 11'	18 56	21 32	+0200W	+59°28'	Fe/ND4	7-7-7
43153T	spool cal	for 43152 -			15 min	ISV 04 3920	ISV A3 4300	ISV 02 4810	
43154	HD 34549	05 13.2	+13 29	21 51	0112	+0320W	+13 31	Fe/ND4	7-7-7
43154F	FOCUS							FE/ND4	11-11
1979	Jan 18 - KK								
43154T1	Comp test - W side of grating covered			11:30				Fe/—	30
T2	" E	"	"					"	"
T3	N							"	
T4	S							"	
F2	Focus test								20-20
F3	Focus test			15:00				Fe/—	20-20
T5	Comp test - W side of grating covered — stellar docker							Fe/—	10
T6	" E	"		"				"	
cont.									

Spectr. Temp. 18° F ..... Dome Temp./Hum 16°F/87% Transparency Conditions thin cloud .....

Focus ..... 5.1 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

290

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68	BS	IIaOe	B		cent	vvs/ red
100/100	2	6.7	A2	BC	G12/.68	BS	IIaOe	B	Am MR	(comp str)	Fine
100/100	1-2	7.85	A0	BC	G12/68	BS	IIaOe	B	Am MR	(comp too str)	sl wk
100/94	2	7.5	B9	BC	G12/.68	BS	IIaOE	B	Am MR	comp too str	Fine
				BC	G12/.68	BS	IIaOE	B		15°F	right on
				RC	G16/.7	RS	09802	B		T=12°F F=516	
					"						
					"						
					"						red
				RC	G16/.7	RS	09802e	B		T=12°F F=514.0	red
				BC	G12/.68	BS	IIaOe	B			
					"						

Pg #1

IIaO-e * 12108 – 18019

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Date Jan 18/19 1979 Observers Fgj-Tn/Blu-Tq

Emulsion Batches:

IIaO-e	12108 – 12019	20 20 20
098-02e	30038 – 08019	21
IIaS-e	31058 – 12019	

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43154T7	Comp test, diffuser over BS, comparison decker, no lenses in feed							Fe/Ne/–	240
F4	Focus test	$\tau = 0$	$\delta = 40'$	15:40				Fe/–	10-10
43155	HD 3712 (w Cas)	00^h 34.8	+55° 59	17:57	18:00	00^h 54 W	+56° 21	Fe/NDX7	6-6
43156	HD 1976	00^h 18.9	+51° 28	18:05	18:41	1^h 51 W	+51° 50	Fe/NDX7	4-4-4
43157	HD 4180	00^h 39.1	+47° 44	18:46	18:56	1^h 46 W	+48° 05	Fe/NDX7	4 8
43158	HD 18537	02^h 53.7	+51° 57	19:03	19:20	6^h 06 E	+52° 11	Fe/NDX7	4-4-4
43159	HD 20315	03 11.0	+43 39	19 23	19:41	6^h 00 E	+43 52	11	4-4-4
43159T	SPOT CALIBRATION FOR 43155-9, 62.				15min @ 15V	D4 3900 ?	D3 4300	D2 4419	
43160	HD 19845	3^h 06.4	+47° 43.7	19:54	23:16	3^h 31 W	+47° 57	Fe/NDX7 / Ne/–	4-4-4 / 4-4-4
43160T	Spot Calib for 43160.				15min @	15V D3 4810	7V D1 H2	7V D2 5450	
43161	HD 37168	5^h 33.7	-2° 39	23:20	00 06	2 04 W	-2° 40	Fe/–	5-5-5
43061T	Spot Calib for 43061, 67.				15min @ 15V	D4 17.5V 3900	15V D4 4300		
43062	HD 84441	09 40.2	+24 14	00 13	00 19	01 51 W	+ 23 48	Fe/ND	9-9
43063	HD 86590	09 54.6	+ 25 02	00 25	03 52	01 30 W	+24 35	Fe/NDX7	6-6-6
43063T	Spot Calib for 43063-66.				15min @ 15V	D4 3900	D3 4300	D2 4610	

Spectr. Temp.
Focus 5/4
Spectr. Temp.

Exp. Mtr | Seen

40/10
300/35 4
80/16
80/15 3
80/17 3
80/? 3
45 2
45/12
300/120 3

Spectr. Temp. +11°F ..... Dome Temp./Hum. +9°F / 76% Transparency Conditions ... CLEAR .....

Focus ... 514-521 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68	BS	IIaOe	B			TOO wk
				"	"	"	"	"		T=12° F=514	sl red
40/10		3.34	KOII	BC	G43/.5	BS	IIaOe	B	Std Vel	Focus=521 Temps+11°	fine comp str
200/35	4"	5.45	B5II	BC	G43/1.5	BS	IIaOe	B	Tnr/Rm		sl str comp str
80/16		4.44	B5III	BC	G43/1.5	BS	IIaO-e	B	Tnr/Rm		sl strong comp sl str
80/15	3"	5.19	B7III	BC	G43/1.5	BS	IIaOe	B	Tnr/Rm		v sl strong
80/17	3"	5.41	B8V	BC	"	"	"	B	Tnr/Rm		v sl str comp sl str
							"				
60/?	3-5"	V: 8.1	G2	BC	G65/1.5	RS	098-02-e	B	RS CVn/Fgi	* counter not working Focus 514 Temps+11°F	fine comp str
							"				
120/45	3-6"	3.51	O9.5V	BC	G12/1.68	BS	IIIa-J-e	B	Sp Bin Obs	Focus 516 T=+5°F	V sl str NO COMP
							"				
40/12		3.76	GOII	BC	G12/1.68	BS	IIaD-e	B	Rm/Prog		fine comp str
300/130	3-4"	7.91	dG5	BC	G12/1.68	BS	IIa-O-E *	B	S, B, Obs	hazy	v sl wk comp sl str
							IIa-O-E *		Placed next to strips in Eight Cas		
										OVER	

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Date Jan 18-19 Cont. Observers T.G.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43064	HD 84441	09 40.2	+24 14	03 57	04 04	1 55 W	+23 [illegible]	[illegible]	9-9
43065	HD 97937	11 10.7	+13 23	04 09	06 13	2 34 W	+12 54	"	6-6-6
43066	HD 84441	09 40.2	+24 14	06 18	06 26	4 18 W	+23 49	"	9-9
43067	HD 124897	14 11.1	+19 42	06 34	06 39	0 1 W		"	9-9
43067F1	Focus Test		[PHA adj is locked]					Fe/—	6-6
43067F2	Focus Test							Fe/—	6-6
43167 T1	Test exp. Comp 10m Ar lamp before opal glass on BS + 4s Fe/4xND on stellar								

Spectr. Temp.
Focus
Spectr. Temp.

Exp Mtr	Sc
43/12	3
43/7	3
43/13	3
43/55	3

Spectr. Temp. ..... Dome Temp./Hum. ..... Temp was −5°F at 4AM Transparency Conditions ..... t/a 29 .....

Focus .....

Spectr. Temp. +2°F ..... Dome Temp./Hum. −2°F/85% KK Note IIaO strips stored in Big Box on the right. 2 IIIaJs on left.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/12	2'-4"	3.76	GOII	BC	G12/688	BS	IIaO-e*	B	Rm-Proj	+2°F in spectrum 5'5	v sl stm comp sl stm
400/117	2'-3"	6.99	A6n	"	"	"	"	B	SP Blu	very hazy	v sl stm comp stm
40/13	3"	3.76	GOII	"	"	"	"	B	Rm-Proj	hazy	fine comp sl stm
40/55	3'	1.3	K2 Imp	"	"	"	IIIaJe	B	std vel	in Big Box on left.	fine but high fog
				BC	G12/688	BS	IIaO-e*	A	T=+2 °F	Focus 516 red+1.018 blue and +1050	red
				"	"	"	"	B	"	"	no stellar
					is the ND filter still in position 1?? on several plates comp lines ghost thru stellar						
				BC	G12	BS	IIaOe	A	T= 26° F= 508		

Date JAN 28 21h Observers T.m

Emulsion Batches:
8m 69° IIaO-12108 Unexposed
4m 69° IIaJ-C 31058 12019

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43167T2	Tests to check Comp "Ghosting" in stellar for					120m slit		Fe/—	15
T3	"					"		"	45
T4								Fe/ND4	45
T5								"	15
F3	Focus Test							Fe/—	5/5
F4	Focus Test After PHA adjusted & locked				Blue End Red End	>1/3 Turn CCW 1/4 Turn CCW		Fe/—	5/5
T6	Tests to check Comp Ghosting			for	120m slit			Fe/—	15
T7	" "	"	"	for	150m slit			Fe/—	15
T8								Fe/—	45
T9								Fe/ND4	45
T10								Fe/ND4	15
								—	10
	Jan 30/31 Tests Bts				IIIaJ 31058-28019			—	30
43167F11								Fe/—	30
F12								Fe/—	100

Spectr. Temp. +33°F ..... Dome Temp./Hum. +32°F .... Transparency Conditions 296

Focus .... 5.06 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Normal Exp				BC	G12/.68	120μ	IIIa J-C	B	Adjusted Decker relay switch so Arc would Fire with Decker in.		ghosts
3x Normal Exp						"	"	B			many ghosts
3x Normal						"	IIIa O-	B			ghosts
Normal						"	"	B		sp str?	slight ghost
*Act of Mask switching, activates					Filter wheel	"	"	B			cent st Blue
Is that a bad sign?						"	"	A	Temp +33 still	cent Red blue and needs more CCW Turn	
Normal						120μ	IIIa J-C	B	should be same as T2		Ft ghosts
Normal						150μ	"	B			ghosts
3x Normal						"	"	B			many ghosts
3x Norm						"	IIIa O	B			slight ghost
Norm						"	"	B		str	many Ghost,
Norm				What's with the 300μ slit?							
3s											
norm				BC	G12/.68	70μ	IIIa J-C	B		sp temp: 2a°F focus 535	
5x norm				BC	G12/.68	70μ	IIIa J-C	B			

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Date Jan 31 / 1 Observers Bts / [illegible]

Emulsion Batches:

5m 68° IIIa-J
4½m 68° 098 ..... 24 197
7m 68° IIa-O 17 193

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43167F13	focus (comp only)							Fe/–	20
	Fri / cal								
	Fe62/3		Bts			IIIaJ 3105		8-28-17	
43167F14	focus		(comp only)					Fe/–	15
F15	"							"	75
F16	"							"	15
F17	"							"	75
			Bln-Bts / Fql-Bts						
43168	HD 36486	05 21.9	−00° 22′	22h 5T	22 52	01h 54 W	−00° 18′	Fe/NDX4	8-8
43169	HD 65626	07 54.5	+57° 33′	23h 16m	4h 05	04h 38 W	+57° 20′	Fe/NDX4	4-10-14
43169T1	spot cal for 43168		15 min 15V		04 03 02 3900 4300 4810			Nc/–	4-10-10
43169T2	spot cal for 43169		15 min		15 03 7V01 7V02 4810 Hα 5450				
43170	HD 118216	13h 30.3	+37° 42	5h 02	6h 29	1h 29 W	+37° 17′	Fe/NDX4 Nc/– Fe/–	8-8-8 8-8-8 20-20
43170F1	focus								

Spectr. Temp. ..21°F..... Dome Temp./Hum. .....

Focus .....510.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Transparency Conditions ...clear ? 11 PM.....

GOOD METEOR TRAIL

Some aurora in southeast

298

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.62	70μ	IIaJ	B		plate chipped at one end	
normal				BC	G12/.62	120μ	IIaJe	B		20°F focus 510	
5x				"		"	"	"		(Fe [illegible]	
normal				"	"	150μ	"	"			
5x				"	"	"	"	"			
20/5	3	1.98	09	BC	G12/.68	RS	IIaOE	B	CNO	20°F focus 510 comp weak & uneven. Star v sl. strong	
400/608	3	7.1	G0	BC	G16/.7	RS	098-02	B	RSCVn-Fgl	Star sl. strong No comp.	
							IIaOe				
							096e			CLAMP PROBLEMS	
100/200		V=4.15	F2 IV	BC	G16/.7	RS	018-02	B	RSCVn/Fgl	Star strong No comp!	
							074-02	B	Rscurled	temp 15°F focus 510	NO comp.

299

Date Feb 3/4 Sat/Sun Observers KK-Bts

Emulsion Batches: IIaO 12.108-

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43171	HD215182	22h38m	+29°42'	18h10m	18h37m ?	+04 32W	+30 07	Ne/-	30
71F1	focus							Fe/-	20-20
71F2	focus							Fe/-	10-10
71F3	focus							Fe/-	20-20
43172	HD47105 Rhem	06h 31.9m	+16° 29'	21h16m	21 22	00 37 E	+16°27'	Fe/ND4	15?-15
~~43173~~	"	"	"	~~21h 28m~~			"	Fe/	6
72F1	focus comps only							Fe/-	6

Spectr. Temp. ..... Dome Temp./Hum. 21°F/87% Transparency Conditions 300

Focus 510 → 511 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 9 ! but seeing!

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit (shutter loses)	Emulsion	P.H.	Program	Remarks	Quality
400/490	2"	V-30	G8II +F?	RC	G12/1.9	RS +V"	HIE	B	AsmSp KK	clouds	v sl. strong comp. fine
500.4		+28μ		RC	G12/1.68	70μ	IIIaJe	B			red
512.6				BC	G12/1.68	70μ	"	B			v sl. sl.
510.4		+2μ		BC	G12/1.68	70μ	"	A		F = 510	v
00/48			A0 IV	BC	G8/-.25	120μ	IIaOe	B	AsmSp KK	T = 22° F not 511	v sl str. focus fair
00/				BC	"	"	IIIaJe	B			
				BC	G8/-.25	150μ	IIaO	B	after 1½ turn out on Tempest screen		
									ghosts on 6-8 strong lines, comp. sl. strong		
									12^3 total probably enough with 4x ND		

301 MON/TUES

Date Feb 5/6 1979 Observers Fuji-Li

A 1½ 68° Emulsion Batches: 098-02-E 30038 - 08019 33 18

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43172F2	FOCUS TEST							Fe/—	20-20
43172F3	FOCUS TEST							Fe/—	20-20
43173	HD 22468	3h 31.6	+0° 16	18:19	20.25	1h 35 W	+0° 29.8	Ne/ Fe/NDX4	8-8 8-8
					15UD3	7UD1	7UD2		
43173T1	opt cal for plates			15min	4810	Hα	5430		

Spectr. Temp.
Focus
Spectr. Temp.

Exp Mtr Sec

10/02

Spectr. Temp. 17°F Dome Temp./Hum. 11°F/70% Transparency Conditions SOME CLOUD

Focus 512

Spectr. Temp. 14°F Dome Temp./Hum. 8°F/

302

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
505.5			+25μ	BC	G14/.7	RS	098-02-e	A	TEST	T=17°F, F=512	sl red
505.5			+17μ	BC	G16/.7	RS	098-02e	B	TEST	T=17°F, F=512	sl red
100/62		V= 6.01	GOV	BC	G16/.7	RS	098-02-e	B	RS CVn/Fgi	CLOUDS THIS IS WR G8 V	
					↑ 0.007?		098-02e				

303 Tues/Wed

Date ..Feb..6/7..... Observers ...But.-Bts.....

8m 66° Emulsion Batches: Date .12.018 - 28019

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43174	HD 38817	05 43.4	+43 59	20h 21m	21 39	+00 33W	+43° 57'	Fe/no	5-10
43174F	FOCUS TEST							Fe/-	5-5
	Feb 7/8 Wed/Thurs		Bts			098 ave	30038-08019		
43174F2	focus							Fe/-	20-20
43174F3	focus							Fe/-	30-30
43174F4	focus							Fe/-	30-30
	Feb 8 Thurs	KK							
	F5 focus							Fe/-	20-20
	F6 focus							Fe/-	20-20
	F7 "							"	"
	F8 "							"	"
43174T	Spot test			① ② ③ all Ha 2m D4 7V			② reversed		

Spectr. Temp. 16° F ..... Dome Temp./Hum. 13°F/82% Transparency Conditions Haze ..... 304.

Focus ..... 512 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/31	5-8	7.51	A1	BC	G12/.68	120μ	IIaOe	B	Am MR	clouds	uneven bkr
				BC	G12/.68	120μ	"				ok
spec temp = 21°F focus = 510											
				BC	G16/.7	RS	098o2e	B			sl red
				BC	G16/.7	70μ	098o2e	B		exp time not accurate	sl blue
				BC	G16/.7	70μ	098o2e	A		(arc kept cutting out)	v sl blue
spec temp 20° F = 510				BC	G16/.7	120μ	098	B			
				RC	"	"	"	"			red
				RC	G12/.68	"	"	"		5040 +21μ	red
				RC	G12/.68	RS	"	"		505.7 +19μ	sl red
							098				
				focus for RC should be set 6 units less than BC							

305

Date ... Feb. 8/9 ..... Observers ... KK-Bts/Bts .....

Emulsion Batches:
IIIa Jaze ... 31058 ... 08019
HIE Nov 77
IIIa Jaze 31058 02029

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43175	HD 215182	22h 38m	+29° 42'	18h 23m	19h 16m		+30° 07'	Ne/—	30-30-30
43176	HD 12929	02h 02m	+22° 59'	19h 28m	19 50?			Ne/—	30-30-30
43176T	Spot calibration		① D3 8464Å 7½V 5m			② D3 8464Å 7½V 15m		③ D3 7685	
43177	HD 47105	06h 319	+16° 29'	20h 08m	21:44	④ 04W		Fe/—	6-6-6
43178	"	"	"	21h 50m	22:32	052W		Fe/—	6-6-6
43179	"	"	"	22:37	23:20	191W		Fe/—	6-6
43179T	spot cal	for 43177-43181		15min 15V		4300 D4	(all hour angle)		
43180	HD 61421	07h 340	+05° 29'	23:25	23:37			Fe/—	6-6-6
43181	HD 47105	06h 319	+16° 29'	23:43	00:35			Fe/—	4-6-6
43182	HD 84441	09h 40m	+24° 14'	05:44	01:13	100 25W	+23° 52'	Fe/Na	6-6-6
43183	HD 89449	10h 14.3m	+19° 57'	01 26	03:33	102 12W	+19° 34'	Fe/Na	6-6-6
43183T	spot cal	for 43182-83-84		15min 15V	D4 3900	D3 4550	D2 4810		
43184	HD 84441	09h 40m	+24° 14'	03° 45m	04° 14m	+03h 27m W	+23° 52'	Fe/Na	6-6-6
43185	HD 139492	15h 35m	+36° 58'	04h 35m	06 39	+00 01	+36° 41'	Fe/—	6-6-6
43185T	spot cal	for 43185		15min 17V	D4 3900	15V D4 4300	15V D4 4810		
~~43186T~~	focus							Fe/—	6—6

Spectr. Temp. 20° ..... Dome Temp./Hum. 7°F / 79% Transparency Conditions very slight haze, few scattered clouds

Focus 506 306

Spectr. Temp. -2°F ..... Dome Temp./Hum. -9°F / 71%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50	5"		GE II + P2	RC	G12/.9	RS	HIE	B	Am Sp KK	cylindrical lens out	flexure
40/50		3.15	K2 III	"	"	"	"	"	Std Vel	adjustment	focus
7½ 15m							HIE				
40/75	6"	1.9	A IV	BC	G8/-025	70μ	IIIaJ e	"	Am Sp KK	Spano 14°F 513 poor focus comp w/ one slit	
40/76	5"	"	"	"	"	"	"	"	"	11°F 514 refocused comp	"
40/75	4 5	"	"	"	"	"	"	"	"	10°F	"
40/70		0.6	F5 IV-5	BC	"	"	"	"	Std Vel	focus slightly changed	"
40/75	5-6	1.9	A IV	BC	G8/-025	70μ	"	"	Am Sp KK		"
00/50		3.1	G0 II	BC	G12/.68	150μ	IIaO e	B	Evans	6°F 516	most strong comp with
00/33	6-7	5.3	F5 I				"		Std Vel (Evans)	thin cloud, windy	most strong comp w/ one corner is light struck
00/50		3.1	G0 II	BC	"	"	"	"	Evans	clear, haze	most strong comp w/
00/59	5-7	4.95	B7 I				IIIaJ e	"	Pal Hyp Pr.	poor focus, time contained in due to poor seeing, no comp.	
				"	"	"		"			
							IIaO e			-2°F 518	no comp discarded

307

Date Feb. 9/10 Observers B.ts. B.n.

Emulsion Batches:
J.Ae.
.....
.....

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	See
43186F	focus							Fe/-	6m6		

Spectr. Temp. +5°F Dome Temp./Hum. ..... Transparency Conditions .....

Focus 516

308

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/168	120μ	IIaOe	B			

309

Date Feb. 10/11. 1979. Observers Tim - Pat

Emulsion Batches: 7" 68° IIaOe 12018-09029 16206

Plate No. Start	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43187	HD 21963	3 36.4	+32 38	18 35				Fe/ND4	6
43187	HD 38670	5 42.4	+20 56	20 00	21 02	0 18 W	+20 49	Fe/ND4	6-6-6
43188	HD 71663	8 23.5	-2 11	21 16	23 40	0 18 W	-2 29	"	6-6-6
43189	HD 74874	8 41.5	+6 47	23 48	0 04	0 28 W	+6 27	"	6-6-6
43190	HD 87822	10 02.5	+32 06	0 16	3 00	1 58 W	+31 40	"	6-6-6
43190T	spool on	for 43187 -		15 min	151 (1)39	D4 (2)	D3 4300 (3) 4810	D2	
43191	HD 113022	12 55.7	+18 55	3 14	5 10	1 16 W	+18 26		6-6-6
43191F	focus test							Fe/-	6-6

Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr

Spectr. Temp. ...9°F..... Dome Temp./Hum. ...14°F/79°... Transparency Conditions ..clear.....

Focus .....515.....

Spectr. Temp. ...-4°F..... Dome Temp./Hum. ...-10°F/79°...

310

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~100~~		~~7.2~~	~~F5IV~~	~~BC~~	~~GR/.68~~	~~150μ~~	~~IIaOe~~	~~B~~	~~Waterburn~~		
800/200		5.02	B9	BC	G2/.68	120μ	IIaOe	B	Waterburn		sl. str.
800/244		6.6	F0	BC	G2/.68	120μ	IIaOe	B	"		sl. str.
100/35	5"	4.0	F8	"	"	"	"	"	"	STAR exposed, in port, Thru comp. slocker	
200/60		6.6	F5	"	"	"	"	"	"		sl. str.
200/41		6.6	F7	"	"	"	"	"	"	Clouds out -2°F 518	sl. str. comp sl. str
				"	"	"	"	"		-4°F 519	

311

Date Feb 11/12 1977 Sun Mon Observers Ly-Ri / Hh-Ri

Emulsion Batches: 7-68
IIaO-E 12018-09029 ... 16 193
IIaF 12018-12029 ... 16 190

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43192	HD102140	01 35.2	+60 32	18:41	19:57	03 27W	+60 43	F/	6
43193	"	"	"	20:02	21:00	04 29W	+60 44	Fe/NDH	6-6-6
						D4	D3	D2	
43193T1	spectral tri plate	43192-	43197		15min @ 15 Volts	3900	4300	4810	
43194	HD61421	07 340	+05 29	21:17	21:20	01 05E	+05 14	Fe/ND4	6 12
43195	HD47105	06 319	+16 29	21:26	21:43	00 15E	+16 22	Fe/ND4	6-
43195F	Focus	06 57	+16 22					Fe/-	66
43196	HD76151	18 17.4	-5°24	01.20	02.38	02 54W	-05°23	/ND4	6-6
43197	MOON	9 47	+10 40	02 43	02 44	02 08W		Fe/ND4	6-R
43198	HD103095	11 47.13	+35° 26	02.50	04 29	01 48W	-37-09	Fe/ND4	6+
						D4	D3	D2	
43198T1	spectral tri plate	43198-		15min	@ 15 Volts	3900	4300	4812	
43198F	focus test							Fe/-	6-6
198T2	comp test							FeNe/4	60

Spectr. Temp
Focus
Spectr. Temp

Exp Mir

Spectr. Temp. +4F ..... Dome Temp./Hum. +2°F /80% Transparency Conditions ... fair ... got better ... 312

Focus .... 517 .....

Spectr. Temp. +4°F ..... Dome Temp./Hum. -2°F /77% just before clouds rolled in full moon.

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/200	3+	5.5	B8	BC	G12/.62	120μ	IIaO E	B	Sp Bun-Ly	F517	fine
800/190	3	"	"	"	"	"	"	"	"	" PIEK LIMIT	
							IIaO-E				
20/5	3	0.3	F6IV	"	"	"	"	"	Std Vel.	clouds	sl str.
800/50	3	1.9	do IV	"	"	"	"	"	Asn-KK	clouds 1.4	v sl str
				"	"	"	"	"		+4°F 517	
400/65	3	6.7	dG3	"	"	"	"	"	Asn Sp KK	.45 +4°F 517 haze rel	v sl wk
100/35			G2V						Std Vel	2.3	sl strong
400/75	2-2½	7.20	G8III	BC	G12/.69	120μ	IIaO E*	B	Asn Sp KK	thickening haze 0.7	v sl str
							IIaO E*				
				"	"	"	"	B		F 517 T = 3°F	good v sl wkd in red
				"	"	"	"	A			
							Comparison		sl. strong on all		

Comparison Type/Filter Exp.

313

T = 68°

Emulsion Batches: IIaO-E 12018-12029 ... 16 200

Date FEB. 12/13. MON-TUES/79 Observers ..Bat-Ri.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Exp Mir. / Focus / Spectr. Temp
43199	HD 38017	05 43.4	+45 59'	21 10	00 : 23	03h 47m W	+43° 57	FE ARC NDX4	4-4-1	92/90
43199T1	spot cal for plate	43199-		15 min	@15 Volts	D4 3900	D3 4300	D2 4810		
43200	HD 138406	15h 26.8	+62°05'	00:36	03 11	-03 03 E	+61°45	FE ARC NDx4	4-4--	100/87
43200F1	focus test							Fe ARC —	66	

Spectr. Temp. ..12°F..... Dome Temp./Hum. ..5°F....80% Transparency Conditions ....clear and cold.....3.14

Focus .....514.....

Spectr. Temp. ..+02°F..... Dome Temp./Hum. ..-3°F..80%

Exp. Mtr. NO FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/90	5"	7.51	A1	BC	G12/,68	120μ	IIaoE	B	Am MR		comp doubled* v sl strong
							IIIaoE			v sl. blue	
400/87	5	6.79	A0	BC	G12/,68	120μ	IIaO-E	B	Am-MR	+06°F F516	v sl. strong
"	"	"	"	"	"	"	IIaO-E	B		CLOUD T+02°F 516	

* looks like last are imposed after bumping pl. comparison still sl. strong

315

Date FEB. 13/14 TUES/WED. / 14 Observers Bud-Bill

Emulsion Batches: Ilford 12108 – 12229 16 202

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43201.	HD 23409	03 39.9	+24 04	18h 11m	18h 18m	+00 05W	+24° 19'	FE ARC NDX4	4-4-4
43202	HD 16855	02 37.1	+43 07	18h 32m	20 48	+03 22W	+43° 28'	"	4-4-4
43202T	pol cal	for 43201 –		15min 15V	(1) 3900 D4	(2) 4300 D3	(3) 4810 D2		
43203	HD 43496	06 11.4	+15 53	20h 54m	00 19	+03 20W	+15 53	FE ARC/ NDX4	4-4-4
43204	HD 138406	15 26.8	+62 05	00 36	03 46	-02 25E	+61 49	"	4-4-4
43204F	focus							Fe/–	4-4

Spectr. Temp
Focus
Spectr. Temp

Spectr. Temp. +7°F ..... Dome Temp./Hum. 0°F / 63% ..... Transparency Conditions . clear ..... 316.

Focus ..... 516 .....

Spectr. Temp. -2°F ..... Dome Temp./Hum. -7°F / .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/9	5"	3.8	B9	BC	G12/.68	120μ	TI aOE	B	B STD VEL		vs/ str
100/90	5-8	6.7	A2	"	"	"	"	"	Am MR		v sl str
100/100	5	7.16	B9	BC	9"/.68	120μ	TI aOE	B	Ap MR		sl str
100/52	5	6.79	AO	"	"	"	"	"	Am MR	+1°F 518 THN CIRRUS	fine
				"	"	"	"	"	519A ~~520~~	THICKER CIRRUS -2°F 518	v sl blue

317

Date . Feb. 16/17 Fri./Sat Observers .... Inr.-Bts.....

8m 67° Emulsion Batches: IIaOe 12108 - 12029 17 208
~~IIaOe 12108 - 13029~~
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43205F	focus							Fe/-	4-4
43205	HD 149551	$2^h 19.3^m$	$+10° 09'$	$18^h 43^m$	$20^h 29^m$	$+3^h 33^m$	$+10° 27.3'$	Fe/NDx4	3-3-3
43206	HD 42560	$6^h 06.3^m$	$+14° 14'$	$20^h 56^m$	$21^h 26^m$	$10^h 44^m$	$+11° 09'$	Fe/NDx4	3-3-3
43206F	focus							Fe/-	4-4
43206T	spot cal for 43205-43206			15min ISV	① 3900 O4	② 4300 D3	③ 4810 D2		

Spectr. Temp. 10°F ..... Dome Temp./Hum. -2°F / 81% Transparency Conditions clear, cold, windy .....

Focus ..... 514 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	612/.68	120μ	IIaDe	B	514.7 ~~517.4~~		
200/50	5-6	5.38	B6	"	"	"	"	"	Bln Br. Sp. Bin.	dense many ½ stars	
200/48		4.18	B3V	"	"	"	"	"	"		
				"	"	"	"	"	516.5	+4°F 516	vsl red.
										snow blowing off dome	

319

Date Feb 17/18 Sat/Sun Observers Myd-Bts/Blu-Bts

8m 67° Emulsion Batches: IIaOe 12105-13229 18208
5m 67° IIIaJe 31052-02029 29272
~~Obsc 19071-02029~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43207	η Aur HD 34411	5h 12.1	+40°01	18h 50m	20 39	53'W	+40°01	Fe/ND4	3-3-3
43208	χ¹ Ori HD 39587	5h 48.1	+20°15	20 47	22 07	1 47 W	+20°12	Fe/ND×4	3-3-3
43209	Callisto (Jupiter III)	~8h 13.5	~+20°36	22 17	01 39	02 58W	+20° 31'	Fe/ND×4	3-3-3
					04	03	02		
43209T	spot cal for	43207	-11,13	15min 15V	① 3900	② 4300	③ 4810		
43210	HD121370	13 49.9	+18 39	01 53	02 04	02 17E	+18 27	Fe/ND×4	3-3-3
43211	HD124897	14 11.1	+19 42	02 13	02 15	02 26E	+19 #	Fe/ND×4	3-3-3
43212	HD139692	15 35.6	+36 58	02 31	03 48	+02 16E	+36° 39'	Fe/-	3-3-3
					04 17 15V	04 15V	04 15V		
43212T	spot cal for	43212		15min	① 3900	② 4300	③ 4810		
43213	HD197835	16h 19m.1	+32°39'	03 57	05h 38m	01h 11E	+32 20	Fe/ND×4	3-3-3
43214	HD198857	16 25.9	+2 12	05 46	05 57	00 58E	+01 59	Fe/ND×4	3-3-3
43215	HD137909	15 23.7	+29 27	06 05	06 23	00 30W	+29 07	Fe/ND×4	3-3-3

Spectr. Temp. +4°F ..... Dome Temp./Hum. -7°F / 79% Transparency Conditions clear., cold .....

Focus ... 516 .....

Spectr. Temp. -3°F ..... Dome Temp./Hum. -7°F / 79%

320

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/100	6"	5.4	G0	BC	G12/68	120μ	IIa-0E	B	Spec. Type	Hartman mask ma Hunt used for focus test	sl strong
300/100	4"	5.0	G0	BC	G12/68	120μ	IIa-0e	B	"		
100/200	4	6.2	G2	BC	G12/68	120μ	IIa-0e	B	"	↓ STAR in comp mask	
40/20	4	3.27	G0	BC	G12/68	120μ	IIa-0E	B	KK *		v sl str
40/20+	4	1.29	K III p	BC	GR/168	120μ	IIa0e	B	Std Vel	test for guide Trouble w/ filter	uneven
200/120	4	4.95	B7V	BC	G12/68	120μ	IIa-0JE	B	SB-Blu/Ly		fine
100/100	4	6.18	A3V	BC	G12/68	120μ	IIa-0E	B	SB-Blu		
40/10	4	3.86	A1V	BC	G12/68	120μ	IIa-0E	B	SB-Blu		
20/15	4	3.93	Fop	BC	G12/68	120μ	IIa-0E	B	KK *		v sl str

321

Date Feb 19/20 Observers Mayall - Ri / Ri

7" 69° Emulsion Batches: Ha-Oa 12102 - 13029
Two* unevaluated

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43215F1	focus test							Fe 1:4	4-4
43216	HR 483 HD 10307	1h 35.7	+42° 07	18 35	19: 14	03m 13s W	+42° 28	Fe 1:4	4-4 4
43217	HD 21691	4h 17.1	+14° 51	19 29	23 07	4h 26m W	+14 58	Fe 1:4	4-3 3
43217F1	spot cal for plate 43216	-43200			15min @ 15 Volts	D4 3900	D3 4300	P2 4810	
43218	15 Mi HD 84737	9 42.1	+46° 29	23 15	00:00	08m W	+46° 04	Fe ND×4	3-3-3
43219	HD 89484 = 8 Leo	10 .145	+20 21						
		10 14.3	+19° 59	00: 08	00. 21	00m 16s E	+ 19° 53	Fe ND×4	3 3-3
43220	"	"	"	00: 24	00. 38	00m 00s			3-3
43221	HD 10 891	14 11.1	+19 42	01. 06	01. 14	03m 19s E	19° 31	Fe ND×4	4-4
43222	"	"	"	01: 17	01: 22	03m 11s		"	4 4 4
43223	HD 97937	11 10 44	+13° 23	01. 34	02: 20	00m 45s W	+12 55	Fe ND×4	4-4-4
43223F1	spot cal for plate 43221-				15min @ 15 Volts	D4 3900	D3 4300 D2 4810		
43283F1	for test							Fe ND.4	4-4

Spectr. Temp
Focus
Spectr. Temp
Exp Min Sec

Spectr. Temp. 18°F Dome Temp./Hum. 15°F / 90% Transparency Conditions Clear the Last

Focus 512

Spectr. Temp. 16°F Dome Temp./Hum. 5°F 98%

322

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/1.68	120μ	IIaO E	B	514.6	T 18°F 512	sl blue
00/75	3"	5.6	G2	BC	G12/1.68	120μ	IIaO E	B	Solar Type		
00/225	3"	7.5	G0	BC	G12/1.68	120μ	IIaO E	B	Solar Type		
							IIaO E				
00/65	3"	5.7	G1	BC	G12/1.68	120μ	IIaO E	B	Std Type		
00/80		2nd V 5.3	Kodak E	BC	G12/1.68	120μ	IIaO E	B	Std Type	wrong star	
00/80		"	"	"	"	"	"	A	"	wrong star	
40/35		1.29	Kodak		G12/1.68	120μ	IIaO E	A	Std Type		sl str
70/35		"	"					B	"		sl str
55/48		6.49	AGK		G12/1.68	120μ	IIaO E	B	Spec Std		
							IIaO E			I give up its getting worse by the minute	
					9	16μ	512				

323

Thurs/wed

Date Feb 20/21 Observers M.P./Bts

Emulsion Batches:
IIaOe...12108-20029
.....
.....

Spectr. Temp
Focus
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
43224F	focus							Fe/—	4-4		
43224	α Tau/HD29139	04h 30.2m	+16° 18'	18h 25m	18h 31m	-0h 17m	+16° 27'	Fe/Neu	2-2-2	4/24	
43224T1	Grating illumination	Fe Ne 120μ	small lens + diffuser	103a	400 sec						
T2	Full aperture	"	"	"	"			Fe Ne/61	30. 30		
T3	Same + Wr 6 filter	"	"	"	"			"	"		
T4	Same arc + Wr 6							Fe/Ky	12-12		
F2	Focus test							Fe/—	6-6		
F3	focus test							"	"		

Spectr. Temp. +24°F Dome Temp./Hum. -25°F Transparency Conditions Partial Cloud

Focus 508

Spectr. Temp. Dome Temp./Hum.

324

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G12/.68	12μ	IIaOe	A			good
40/24			KSII	BC	G12/.68	12μ	IIaOe	A			fine
										clouds	
				"	"	12μ	IIaOe	B			
				"	"	"	"	"			sl. wk
				"	"	"	"	"			red fine uv sl wk
				BC	G12/.68	12μ	IIaOe	A			
				"	"	"	"	B			v sl blue

325

Date Feb 27/28 Tues/Wed Observers But. Rts

8m 68° Emulsion Batches: IIaDe: 12108 - 02208 ?

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43225F	Focus							Fe/—	6-6
25P	"							"	6-6
43225	HD 23793	03h 42.8m	+10° 50'	18h 24m	1: 43	+01 07W	+11° 04'	Fe/ND4	5-5-5
43226	HD 34547	05 13.2	+13 29	18h 49m	22h 07m	+03 02W	+13° 33'	Fe/ND4	5-5-5
43226T	spot calib for	43225-43229		15 min 15V	① 3900 04	② 4300 03	③ 4810 02		
43227	HL 47256	01h 32.6m	+17 50'	22h 13m	0126	+05 01W	+27 49	Fe/ND4	5-55
43228	HD 15112	15 11.5	+10° 54'	02h 16m	04 17	-00 53E	+10 38	Fe/—	4-4-4
43229	HD 134305	15h 04.0m	+12° 52'	04h 22m	06 17	+01 23W	+12 34	Fe/—	4-4
29F	Focus							Fe/—	15-15

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Seeing

Spectr. Temp. +34°F ..... Dome Temp./Hum. ...33°F..... Transparency Conditions ...clear.....

Focus ..... 570.4 ..... 69% outside 326

Spectr. Temp. +33°F ..... Dome Temp./Hum. ...27°F.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	52/68	120μ	IIaO	B			sl blue
				"	"	"	"	A			sl blue
70/7	2-4	4.9	B4	"	"	"	"	B	Std Vel	[illegible] number 26	sl str.
70/64	2-4-6	7.5	B9	"	"	"	"	B	AP MR	number 266	fine
70/76	6-8 8-10	7.21	A3	"	"	"	"	B	Im MR		fine
100/110		7.19	A10	"	"	RS	"	B	Am MR	[illegible]	ok * good alignment
100/120	5	7.24	A7	"	"	"	"	B	Dw MR		ok *
				"	"	"	"	B			sl blue
						* RS plates die at H & K — no UV					

Comparison Type/Filter Exp.

327

SAT-SUN

Date MAR. 3-4/79 Observers KK-TM

Emulsion Batches: 5" 68F IIIa J-E 31056 -02029

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43230	HD 47105	6 31.9	+16 29	20 47	21 35	126 W	+16 23	Fe/—	6-6-6
43231	HD 61421	7 34.0	+5 29	21 47	22 10	101 W	+5 14	"	6-6-6
43231 F1	Focus Test after PHA focus adjustment							"	26-26
F2	"	of PHB						"	26-26
43231 T	Spot calibration		① 3900		② 4300		③ 4810		

Spectr. Temp. +41°F ..... Dome Temp./Hum +37°F / 95% Transparency Conditions .. hazy .....

Focus ..... 502 ..... clouds 328

Spectr. Temp. +40°F ..... Dome Temp./Hum +36°F / 98%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/59	3"-4"	1.9	A0 IV	BC	G8/-25	70μ	IIaJe	B	Asm sp kk		fair
40/16	6"	0.78	F5 IV V	"	"	"	"	B	std vel	Turned both screws CCW ~15° on PHA	wk
				"	"	"	"	A		+.007	v sl red
				"	"	"	"	B		-.004	v sl blue
							IIaJe				
				Note (probably also	G8/-.025 ↓						
				(incorrect till Mar 11)							

329

Sun - Mon

Date Mar 4 5 1979 Observers GIS / Tm

Emulsion Batches:
8m 68°F IIa-E 12108 : 02208 ??
IIa-E * 12108 - 22029

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43232	HD 91316 (pLeo)	10 27.6	+9 49	19 37	20 18	3 41 E	+9 23	Fe/Ne-4	8-8-8
						D4 D3 D2			
43232T1	Spot Calib for 43232 ✓				15 min @ 15V	3900 4300 4810			
43232T2	Strip Calib for 43232							90 sec	
43233	HD 91316	10 27.6	+9 49	20 28	20 41	3 18 E	+9 23	Fe/Ne-4	12-12
43234	HD 91316	10 27.6	+9 49	20 45	20 51	3 08 E	"	"	8-16
43234T1	Strip Calib for 43233-34							90 sec	
43234T2	Spot Calib for 43233-34				15 min @ 15V	D4 D3 3900 4300	D2 4810		

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. Secs

Spectr. Temp. +41°F Dome Temp./Hum. +38°F/100+? Transparency Conditions Hazy

Focus 502

Spectr. Temp. +41°F Dome Temp./Hum. +38°F/100+?

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/76	3"	3.71	B I Ib	BC	G81-.25	120μ	IIa-O-e	B	Bln. Gl std.	equiv to 100/18 same run	fair
100/9	2'	3.71	R I Ib	BC	G81-.25	120μ	IIa-O-e*	B	Bln Gl std		ol wk
100/2½	2"	4	11	11	11	4	11	B	11		v wk

330

331

Wed Thurs

Date MAR. 7-8.179.... Observers . B.m.-T.m. / R.m.-T.m.....

5" 67° Emulsion Batches:
8" 68° IIIa-J 31058-02029
IIa-O 12108-28024

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43234F1	Focus Tests							Fe/—	26-26
43234F2	" "							Fe/—	26-26
43235	HD37468	05 33.7	-2°39'	18 49	19 20	0 26W	-2°39'	Fe/—	8-8-8
43236	HD91316	10 27.6	+9 49	19 33	19 37	0 9 10 E	+9°29'	Fe/ND4	8-
43236T	Spot Calib for 43235			15min @	17.5 D4 3900	15V D4 4300	15V D4 4810		
43237	HD91316	10 27.6	+9 49	19 43	19 45	04 02E		Fe/ND4	12-12
43238				19 53	19 57	03 50			12-12
43239				20 03	20 10	03 37E			12-12
43240				20 15	20 25	03 22E			8-8-8
43241				20 28	20 42	03 05E			8-8-8
43242				20 47	21 49	01 58E			8-8-8
43242T1	Spot Calib for 43236-44			15min @	15V D4 3900	03 4300	02 4810		
43242T2	Strip Calib for 43236-44.							90-cc	
43243	HD91316	10 27.6	+9 49	21 53	00 04	0 16W	+9 24	Fe/ND4	8-8-8
43244	"	"	"	00 06	00 08	0 21W	"	1 "	8-16

Spectr. Temp. +40°F Dome Temp./Hum. +38°F / 60% Transparency Conditions Sl. Hazy 332.

Focus 502

Spectr. Temp. °F Dome Temp./Hum. /

* Try Eden long gap

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G8/-.25	120μ	IIIaJ-e	A	After vsl CW	Turn of adj screws −.010m	sl red
				BC	"	120μ	"	B		≈ −.001	v slbl.
40/40	2"	3.51	09.5V	BC	G8/-.25	120μ	IIIa-JE	B	Sp. B.n-Bln		fine
100/9	1-2	3.71	B1Ib	BC	G8/-25	120μ	IIaD-e	B	Cal Std		sl wk.
							IIIaJ-e				
150/ no² working		3.71	B1Ib prop	BC equiv to 3 or 5 of	G8	120μ	IIaD-e	B	Calib Std		wk
205/10		3.71	B1Ib	BC	G8/-.25	120μ	IIaDe	B	calib Std		sl wk
200/26	2"										fine
200/36	1-2"										fine
200/55	2"										v sl str
200/300	1"									T=38°F @ end	v str
							IIaD-e				
							IIaDe				
200/60	1"	3.71	B1Ib	BC	G8/-25	120μ	IIa-DE	B	Calib. Std	F ans = 303	burnt
200/6	½-2'	"	"	"	"		"	B			wk

333 Cont #2

Date Mar 7-8 Observers R.m.-Ta

8h 68° Emulsion Batches: IIaO-e 12108 – 07039

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
43245	HD 84441 = ε Leo	9h 40.2	+24 14	00h 23	00 40	1 39 W		Fe/Ne 4	8-8 s
43246	HD 89449	10 14.3	+19 59	00 54	02 31	2 56 W	+19 33	"	8-8 s
43246T	Spot Calib for 43245-46				15 min @ 15V	3900 D4	4300 D3	4800 D2	
43247	HD 84441	9 40.2	+24 14	02h 37		W		Fe/Ne 4	8-8 s
43246F	Focus							Fe/—	08-28

discarded

7039

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Cloud coming 33°F.

Focus ... 505 .....

Spectr. Temp. ... 33.5°F ..... Dome Temp./Hum. 29°F / 40%

Comparison Type/Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	200/150	1"	3.1	GOp II	BC	G8/-.25	120μ	IIaO E	B	Rm prog	33°F; Spectrograph Rep 505 focus	v sl str
	200/120	1"	5.3	Fs K	"	"	"	"	"	Std vel	thin cloud	v sl str
								"				
	200/		3.1	GOp II	BC	G8/-.25	120μ	"	B	Rm prog	Cloud	
					BC	G8/-.25	120μ	IIIaJ				Mod thin

Somehow towards end tiller got to #2. Opal Diffuser may have affected some Fe Arcs.

335 Thurs-Fri

Date Mar. 8-9 1979 Observers K.K.-T.H.

Emulsion Batches:
8m 68° IIaO-E 12108-07039
new DF2 batch

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43247	HD121370	13 49.9	+18 54	02 24	02 57	0 12 W	+	Fe/1-4	8-8-8
43247T	Spot Calc for 43247-				15min@15A	V+ 3900	D3 4300	D2 4810	
43248	HD 124897	14 11.1	19 42	03 03	03 04	0 02 E		Fe/1-4	8-16
43249	HD 131511	14 48.9	19 33	03 18	05 25	1 20 W	+19 13	"	5-5-5
43250	HD 140436	15 38.6	+26 37	05 29	05 43	0 50 W		"	5-5-5
43250F1								rel—	25-25
43250F2								"	25-25

Spectr. Temp. +37°F ..... Dome Temp./Hum. +31°F / H=97% Transparency Conditions ..... Cloudy .....

Focus ..... 504 .....

Spectr. Temp. +35°F ..... Dome Temp./Hum. +30° / 21% # HrL's may be wrong

336

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/55	5"	3.27	GO	RC	GR/I-25	120u	IIaO-e	B	Asm-Spkk		sl str
				"			"				
80/50	3"	1.29	K2	RC	GR/I-25	120u	"	B	stuvel	comp w k	sl str
400/120	8"	6.89	JK1	BC	GR/688	150u	"	B	Asm Spkk	hazy-cloudy	v sl str
400/42	2"	3.8	AOIV	"	"	"	"	B	"		sl str uneven
				"	"	"	IIIaJ	B	"	-.007	sl blue
				"	"	"	IIIaJ	A	d+n = 15° ccw adj	+.004	v sl red
									Note! prob no dif! made in last adjustment of PHA		
							Some = ½ hr kk		spectral sys test exposure		

357 SAT-30m

Date MAR. 10-11. /79. Observers ..Bk.-Tm.....

Emulsion Batches:
8" f2° ..Du Pont 127108 - 07439
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43251	HD 14874	8 41.5	+6 47	23 23	00 23	2 32 W	6 34	Fe/ND×4	5-5-5
43251T	Spot Calib for 43251-55.				15min @ 15V	D4 3400	D3 4300	D7 4600	
43252	HD 112033	12 48.4	+21 48	0 31	1 41	0 15E	21 25	Fe/ND×4	5-5-5
43253	HD 136202	15 14.2	+2 09	1 49	3 04	1^x 10E	1 55	Fe/ND×4	5-5-5
43254	HD 146361	16 10.9	+34 07	4 03	5 10	0 07E	33 58	"	5-5-5
43255	HD 155103	17 04.5	+36 04	5 16	5 55	0 16E	36 02	"	5-5-5
43255F1								Fe/—	15-15
43255F2								"	15-15

Spectr. Temp. ..35°F..... Dome Temp./Hum. +21°F / 82% Transparency Conditions Hazy, windy.....

Focus .....504.....

Spectr. Temp. .+21°F e508 Dome Temp./Hum. +12°F / 90%

338

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/56	5"	3.98	F8	BC	G12/68	12μ	IIaO-C	B	Water Cools	cloud	Fine
	5"	5.46	KO				"		- " -		
400/120	5"	5.86	KO	BC	G12/68	12μ	"	B	Wg/prog		s/sm
400/106	5"	5.6	F8	BC	"	"	"	B	"		Fine
400/100	5-2"	6.20	F8	"	"	"	"	B	"	bal start 508 sot	Fine
400/70	3"	5.71	+5	"	"	"	"	B	"		Fine
					"	"	IIIaJ	B		-11μ	cent/Fine
					"	"	"	A		-13.5μ	cent/Fine

339 Mon-Tues

Date 12/ac 12/3/79 Observers Rut-Tn

Emulsion Batches: IIaO-E 12108 -08039

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43256	HD 23408	03 39.9	+24 04	19 05	19 17	02 36 W	+24 22	5-5-5	Fe/
43256T	Spot Calc for	43256							
43257	HD 38817	05h 43.4	+43° 59'	19 40	22 15	03 28W	+44 04	5-5 5	Fe/
43258	HD 84441 ε LEO	09 40.2	+24 14	22 19	22 20	-00 19E	+23 56	FE/ NDX4	5-5-5
43259	HD 138406	15 26.8	+62 05	22 32	23 48	-04 41E	+61 48	"	5- 55
43259 Fl	Focus Test							Fe/—	5-4

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. Seen

Spectr. Temp. +27°F Dome Temp./Hum +20°F/70% Transparency Conditions . Fine ... s/haze

Focus 508 340

Spectr. Temp. +24°F Dome Temp./Hum. 20°F/80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—	2"	3.8	B9	BC	G2/68	120μ	Tri-X	B	B std vel	No Exp meter may have been jarred	Fine
							"				
From 2038 to 2050	1-2"	7.51	A1	BC	G12/58	120μ	"	B	An MR	No Exp meter * comp wk	Fine
10/12	"	3.1	Gap I	"	"	"	"	A	Rn Prog	* comp wk	s/ str
20 / 21	2-3	6.79	A0	"	"	"	"	B	An MR	comp wk	wk
				"	"	"	IIa0	B		24°F 50% bkgnd vs/ Rad Rad Bkgnd vs/ Flare	
										* Gapped to Arc Comp	
										should do CK now	

* Both PHA & PHB are close, within 2m of focus pl. Use Both sides.

341

Date Mar. 14-15 /79. Observers G.S.-B.S. / R.W.-B.S.

Emulsion Batches:
IIa-O-e 12108-0[illegible] 19 202
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43260F	Focus test			19h 30m				Fe/–	7-7
43260	HD 84491 = 6Leo	9h 40.2	+24° 14	01h 12	02h 07	03 34 W	23h 50.6	Fe/–	8-8-8
43260T	Spot cal for	43260 – 62		15min 15V	① 3900 (04)	② 4300 (03)	③ 4810 (02)		
43261	HD 84449 = 40Leo	10h 14.3	+19° 59	02h 14	03h 56	4h 50W	19° 33.2	Fe/–	8-8-8
43262	HD 186688 = SVul	19h 40.8	+29° 01	04h 30	05h 59	2h 32E	+29° 9.7	Fe/–	5-5-5
43263F	Focus Test			06h 09				Fe/–	5-5

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr. Secm

Spectr. Temp. +34° Dome Temp./Hum. +22°F / 70% Transparency Conditions . intermittent cloud.....

Focus ...504.....

342

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G1 [illegible]-025 (2)		IaOe	B		+34° 504	sl wd
200/111	6-8	3.8	C5II	"	"	"	"	B		+27° 507	v sl str
200/67		5.3	F5II	"	"	"	"	B			v sl str
400/41		6.8-7.7	F0-G1	"	G12/[illegible]	150μ	"	B		+15° 512 cloud	wrong * guide or tilt sl. cl.
										+13° 513	
							again, comp str one side, wk. on other				
								*		Karl can you push this as much as possible please	

Comparison Type Filter Exp

343 Thurs/Fri

Date Mar. 15/16 Observers Bln-Bts

Emulsion Batches:
IIaOe 12108-07039 (exc. c)
IIaOe 12108-08039

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seen
43263F	focus							Fe/-	7-7		
43263	HD91316	10h 27.6	+9° 49'	21h 26m	23 20	too u4W	+09 25	Fe/ND×4	8-8-8	120/120	3
S1	strip cal									90sec	
S2	strip cal									60sec	
S3	strip cal									120sec	
43264	HD91316	10h 27.6	+9° 49'	23 26	00 52	01 36W		Fe/ND×4	8-8-8	120/45	
43264T	Spot cal	for 43263-		15min 15V	(1) 3900 04	(2) 4300 03	(3) 4610 02				
43265	HD91316	10m 27.6m	+9° 49'	00 59	02 30	03 19W		Fe/ND×4	8-8-8	120/120	
43266	HD91316	10h 27m.6	+9° 49'	02 32	03 31	04.15W		Fe/ND×4	8-8-8	120/120	
43266F	focus							Fe/-	7-7		

Spectr. Temp. 20°F Dome Temp./Hum. 16°F Transparency Conditions .....

Focus 510

Spectr. Temp. ..... Dome Temp./Hum. .....

344

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G8/-025	150μ	IIaOe	B		20° 510+15μ red blue	sl red v weak
200/600	3"	3.71	B1Ib	BC	G8/-025	150μ	IIa-oE	B	Calib Std.		v str
90sec							IIaOe				
60sec							IIaOe				
120sec							IIaOe				
200/425		3.71	B1Ib	BC	G8/-025	150μ	IIaOe	B	Calib. Std		
200/300	1-2	3.71	B1Ib	BC	G8/-025	150μ	IIa-oE	A	Calib. Std.	Cloud for 20°E 17 reds	
200/210	11	3.71	B1Ib	BC	G8/-025	150μ	IIa-oE	B	Calib. Std.	19° F=510	
										19° 510	

345 Fri/Sat

Date Mar 16/17 Observers KK-Bts/Bts

Emulsion Batches:
IIaOe..12105-.15039 16 205
IIaJe..31058-.08039
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43267F	focus							Fe/-	7-7
43267	HD 47105	6 31.9	+16 29	19:06	19:18	0 00		Fe/-	8-8
43268	"	"	"	19:21	19:39	0 21 W		Fe/-	8-8
43269	HD 61421	7 39.0	+ 5 29	19.43	11 47	0 31 E	+05 16	Fe/-	8-8
43270	"	"	"	1949	1952	0 26 E	"	Fe/-	8-8-8
43271	HD 47105	6 31.9	+16 29	1957	21:04	1 45 W		Fe/-	8-8-3
43271F1	focus							Fe/-	7-7
71F2	focus								
43272	HD 84441 Cleo	09h 40.2m	+24° 14'	00h 31m	00h 47m	2 22 W	+23° 51'	Fe/ND	
43273	HD 89449 Cleo	10h 14.3m	+19° 59'	00 55	01 48	+02h 48m W	+19° 23'	Fe/ND	
43274	HD 140513	15 44.4	-3 07	02 11	02 30	-01 58 E	-03 22	Fe/ND	
43275	HD 84441 Cleo	09h 40.2m	+24° 14'	0243	03 08	+4 43 W	+23° 52	Fe/ND	
43276	cal cal	for 43267 -			UV 3600 04 (2) 4300 03		(3) 4810 02		
43276	HD 147635	16h 19m	+32° 34'	04 00	05 11	+00 09 W	+32° 22'	Fe/ND x4	5-5-5
43277	HD 163506	17h 51.4m	+26° 04'	05 22	05 57	-00 37 E	+26 02	Fe/ND	
77F	focus							Fe/-	20-20

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Seen

Spectr. Temp: 30°F ..... Dome Temp./Hum. ..... Transparency Conditions ..clear.....

Focus .....506..... cloud 346

Spectr. Temp. ..... Dome Temp./Hum. ..... haze cloud

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G8/-.02	120	IIaO	B		30° 50G	v sl red
40/70	3"	1.9	AoV	BC	G8/-.025	120	IIIJ	B	Asm Sp KK	comps	v sl sm sl. uneven
40/70	"	"	"	"	"	"	"	"	"	still strong on	v sl sm
10/70	4"	0.78	F5V	"	"	"	"	A	Std Vel	one side	fine, but sl. uneven
42/72	"	"	"	"	"	"	"	B	"		v sl sm
40/43	3"	1.9	AoV	"	"	"	"	A	Asm Sp KK	clouds	fine
							IIaO	A		32° 50% +2μ	v sl red
							"	B		haze +11μ	sl red
200/110	4"	3.8	G2	BC	G8/-.025	120	IIaO	B	Rm Ceph	33° 50S	
200/70	3"	5.3	F5V	BC	"	"	"	B	Rm Ceph		
200/50	?	5.50	AoV	BC	"	"	"	B	Bln High Pr.		
200/110		3.8	G2	BC	"	"	"	B	Rm Ceph		
										cloud	
400/70		6.18	A3V	BC	G12/.68	"	"	B	Bln High Pr		
400/50	2"	5.46	F2Ia	BC	"	"	"	"	"		
										32° 50S	

347

Date Mar 17/18 Observers Sat/Sun Tur-Gts

Emulsion Batches:
IIaOe 12108-.15039 18 192
IIaOe 12108-.16039
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Spectr. Temp
Focus
Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Sec
43278F	focus							Fe/—	5-5		
43278	HD 30869	04h 46.2m	+13 29	19h 03m	20h 45m	+03 16W	+13 39	Fe/ND1	5-5-5	400/48	
						D3	D2				
43278T	gal cal.	Co-43278		15min 5x	①3900 D4	②4300	③4810				
43279	HD 127617	14 27.3	+19 13	00h 31m	01 41	-01 25E	+18 48	Fe/ND1	5-5-5	400/48	
43279F	focus							Fe/—	5-5		

Spectr. Temp. 40° Dome Temp./Hum. 35°F Transparency Conditions ...thin cloud.....

Focus ..... 502 .....

348

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					GR/.68	120μ	IIaOe	B		40° 502 -7μ	
400/48	3"	6.77	FS⁻	BC	"	120μ	"	B	Inr Hy. Bin.	very heavy fog	
800/20		8.2	Be	BC	G12/.68	150μ	IIaOe	B	Inr Re	37° 503 clouds	
"	"	"	"	"	"	"	"	"		36° 504	

349

Sun Mon

Date 11/17..18/19..... Observers . GWS-RHS/KK-RHS

8m 68° Emulsion Batches:

8m 68° ~~IIaJe...31058...08039~~ IIaO e...12108-16039

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43280F	focus			18 38				Fe/-	5-5"
43280	HD 91316	10h 27.6	+9° 49'	19 00	21 48	01° 15' E	+9° 16'	Fe/ND-1	8-8-8
S1	Strip cal								
S2	Strip cal								
S3	Strip cal								
43280T	Spot cal	for 43280-91		15 min 15V	(1) D4 3900	(2) D3 4300	(3) D2 4810		
43281	HD 91316	10h 27.6	+9° 49'	21 52	22 36	00 28 E	9° 21'	Fe/ND-1	8-8-8
43282	HD 91316	10h 27.6	+9° 49'	22 38	23 05	00 01 W	9° 21'	Fe/ND-1	8-8-8
43283	HD 91316	"	"	23 06	23 24	00 20W	"	"	"
43284	HD 91316	"	"	23 26	23 43	00 39 W	"	"	"
43285	HD 91316	"	"	23 45	23 57	00 52 W	"	"	"
43286	HD 91316	"	"	23 59	00 09	01 04W	"	"	"
43287	HD 91316	"	"	00 11	00 17	01 12W	"	"	"
43288	HD 103095	11 47.2	+38 26	00 29	01 29		+37 49	Fe/ND-1	5-5-5
43289	HD 116656/7	13h 19.9m	+55 27	01 45	≈2 05	00 02W	54 57		

Spectr. Temp. 44° Dome Temp./Hum. 45° Transparency Conditions thin cloud

Focus 501 350

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	G2/68	20μ	IIaDe	B		44° 501 −205μ close but Ends look Foggy	
100/100	3-4"	3.71	B1Ib	BC	G8/-0.25	120μ	IIaOe	B	Cal. Std.		
90 sec							IIaOe				
60 sec							IIaOe				
120 sec							IIaOe				
							IaOe				
100/71	3-4"	3.71	B1Ib	BC	G8/-0.25	120μ	IIaOe	A	Cal. Std.		
100/50	3-5"	3.71	B1Ib	BC	G8/-0.25	120μ	IIaOe	B	Cal. Std.	45° 502	
100/32		"	"	"	"	"	"	A	Cal Std.		
100/21		"	"	"	"	"	"	B	Cal Std.	Fade under star?	
100/00		"	"	"	"	"		A	Cal Std.	" "	
100/00		"	"	"	"	"		B	Cal Std.	" "	
100/00		"	"	"	"	"	"	A	Cal Std.	" " "	
400/—				BC	G2/68	20μ	IIaDe	B		38° 503	Standard Star 114
1/100				SI.			IIaD			Zodiacal light Thin cloud also	
										cont →	

351

Date ...May 15/17 cont Observers ...KK-Bts...cont...

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43290	HD 137909	15 23 42	+29 27	02 14	approx 2 25	-01 43 E	+29 07		
43291	HD 122742	13 58.6	+11 16	02 32	03 43	+01 08 W	+10 49	Fe/ND-1	5-5-5
43292	HD 124897	14 11.1	+19 42	03 56	0357	+01 10W		"	7-7
43293	HD 130948	14 45.7	+24 20	04 04	04 59	+01 37W	+23 57	Fe/ND-1	5-5-5
43294	HD 137909	15 23 42	+29 27	05 03	05 11	+01 11W	+29 07	"	"
43295	HD 163526	17 51.4	+26 04	05 16	05 51	-00 35 E	+25 50	"	5-5-5
43295F1	Focus test							Fe/	

Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr	Sec
1/8	
1/4	
1/2	
1/120	
1/60	
1/30	
1/15	
1/10	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Thin cloud .....

Focus .....

Spectr. Temp. ... 34° ..... Dome Temp./Hum. .... 30° / 85% ....

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Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/100				ST			IIaD			thin cloud	v wk
400/61	2-3	6.8	G8V	PC	GR/68	12μm	IIaO	B	Asm Sp	F=504, T=36° exp wrote slow	fine
410/14				"	"	"	* "	"	Std Vel	RV= +10.9 ! HE Kennecutt 504	sl str
400/120	2-3	6.5	dG2	"	"	"	* "	"	Asm Sp	35°	sl str
400/101		3.93	F0p	"	"	"	* "	"	Asm Sp		sl str
400/110	3"	5.81	F2Ia	"	"	"	* "	A	Ceph-Fc		sl str
								A			sl blue

353 Mon/Tue

Date Mar 19/20 Observers Myd Bts / Rm Bts

Emulsion Batches: 11a0e 2108 - 15439 18 19

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43295F	focus test			18 30				Fe/—	5-5
				1					
43296	1 Gem HD 41116	5 58.1	+23°16	19 13	19 30	58 W	+23 12	Fe/	5-5-5
43297	μ Cae HD 67228	08 01.9	+21 52	19 41 20	20 50 21 35	58 W	+21 34	Fe/	5-5-5
43298	μ Cae HD 67228	"	"	21 36	22 35	58 W	+21 34	Fe/	5-5-5
43299	ε Leo HD 89961	9h 40.2	+39° 14	01h 29	01 57	+03 45 W	23° 99	Fe/	5-5-5
43300	46 Leo HD 89999	10h 19.3	+19° 59	02h 05	03h 11 D4 3900	4h 25 W D3 9300	+19° 31	Fe/	5-10
43300T	spot cal.		15° 15'						
43301	8 Hya HD 82558	17h 51.9	+2° 4	03h 26	04h 26	01h 56 E	+26° 01	Fe/	5-5-5
43302	HD 116658 = SUCet	13h 40.8	+29° 1	04 38	05 52	02 19 E	+29° 09	Fe/	5-5-5
43302F	Focus Test B							Fe/—	5-5

Spectr. Temp. 40° Dome Temp./Hum. 39° Transparency Conditions thin cloud

Focus 502 354

Spectr. Temp. Dome Temp./Hum. 34°

Comparison Type/Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						BC	G2/68	120μ	IIaDe	A		40° 502	blue
		200/58	34"	5.1	G5	BC	"	"	"	A	Slit Type		str
		200/58		6.0	G2	"	"	"	"	B	"	break at 30 min for bar	v str
		200/57		"	"	"	"	"	"	A	"		v str
		200/56		5.1	F5 IIa	"	"	"	"	A	"	38° 503	s str
		200/23		5.3	F5 I	"	"	"	"	B	"		s wk
		200/60		5.8	F2 Ia	"	"	130μ	"	B	"	Cepk/Rw	s wk
		200/22		6.8-7.6	F0-G1	"	"	"	"	A	"	Cepk/Rw *	v wk
						"	"	"	"	A	"	38° 503	s blue
											* Kod	Also part the time used as possible	

Emulsion Batches:
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.....
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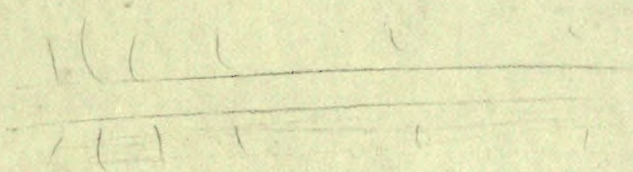
Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	E:

ph A vs B

43255 A-B = −2.5μ

43271 −9μ